

AMERICAN GAS ASSOCIATION MONTHLY

June 1927

Volume IX

Number 6

The Convention Hotel Is a Gas Hotel

By J. E. DAVIES

Visualize the Job to the Employee

By GEORGE D. PENNDMAN, JR.

Propose to Merge N.G.A. with the A.G.A.

Appliance Inspection Improves Service

By E. P. PREZZANO

Does Home Service Affect Gas Sales?

By C. C. CURTIS

**Problems of Public Utility Education
in the Social Sciencies**

By PROF. HORACE M. GRAY, Ph.D.



"The Future of the Gas Industry"

By Geo. B. Cortelyou

**President, Consolidated Gas Company
of New York**

UNDER this title, Mr. Cortelyou discusses the present position and future outlook for our business. Here is an article that every executive, every employee and every director should read. Furthermore, copies should be sent to bankers, prominent business men, heads of local civic organizations and others.

Nearly two hundred thousand copies have already been distributed.

Send for a Sample Copy

Place Your Order Now—

The Price is

\$10.00 a thousand

COMBUSTION

(Industrial Gas Series)

**Has Been Recommended for
Study to Those Who Plan to
Take the M. I. T. Industrial
Gas Course.**

**No stronger testimonial could
be secured.**

**COMBUSTION is a valuable addition
to Industrial Gas Literature.**

***The price is \$1.50 to members
and \$3.00 to non-members***

Principles of Rate Making for Gas Companies

A Lesson on Rates

**Prepared by the 1926
Rate Structure Committee**

**This pamphlet is available
for all educational uses.**

Order Now—

Price \$.25

AMERICAN GAS ASSOCIATION MONTHLY

420 LEXINGTON AVENUE, NEW YORK, N. Y.

HOWARD F. WEEKS, *Editor*

Advisory Committee

JAMES M. BENNETT
FRANK LEROY BLANCHARD
HARLOW C. CLARK

E. FRANK GARDINER

ARTHUR W. HAWKS, Jr.
HENRY OBERMEYER
CHARLES W. PERSON

VOLUME IX

JUNE, 1927

NUMBER 6

CONTENTS

	Page
PROPOSE TO MERGE N. G. A. WITH A. G. A.	323
ANNUAL CONVENTION TO BE HELD AT CHICAGO	325
THE CONVENTION HOTEL IS A GAS HOTEL	327
J. E. Davies	
VISUALIZE THE JOB TO THE EMPLOYEE	331
George D. Penniman, Jr.	
A NEW SALES POLICY AND WHAT IT DID	333
Leonard Fitzgerald	
RESEARCH DEVELOPS A NEW PARTNER-SHIP	335
DOES HOME SERVICE AFFECT GAS SALES?	337
C. C. Curtis	
PROBLEMS OF PUBLIC UTILITY EDUCATION IN THE SOCIAL SCIENCES	339
Prof. Horace M. Gray, Ph.D.	
EDITORIAL	344
APPLIANCE INSPECTION IMPROVES SERVICE	345
E. P. Preziano	
MOVING A LIVE GAS MAIN	348
David L. Meyer	
POSSIBLE OMISSION OF CERTAIN SIZES OF SPECIAL CASTINGS	348
Walton Forstall	
GAS KEEPS PULLMAN CARS WARM	349
R. D. Hays	
PROGRAM ANNOUNCED FOR M. I. T. COURSE	351
BUDD MEDAL FOR SAVING LIFE ESTABLISHED	362
TWO BOOKS FOR ACCOUNTANTS	363
GOOD WILL NEEDS FUNDAMENTAL GROUNDWORK	365
F. H. Holden	
SEVENTY PER CENT OF EXHIBIT SPACE SOLD	369
GAS VERSUS ELECTRICITY—OR IS IT VERSUS?	371
J. B. Nealey	
COOPERATING WITH A \$2,000,000 BUYER....	375
Robert B. Mahn	
DISTANT BLOCK CONTROL FOR MERCURY SEAL DISTRICT REGULATOR	379
Charles S. Snyder	



The
Convention Call
Has Been Sounded



Chicago, Ill.
Stevens Hotel
October 10-14

SUBSCRIPTION RATE

\$3.00 PER YEAR

For statements and opinions contained in papers and discussions appearing herein, the Association does not hold itself responsible.

Entered as Second Class Mail Matter at the Post Office at Brattleboro, Vermont, February 10th, 1922, under the Act of March 3, 1879.

Our Own Who's Who



© Blank and Stoller

XXV

H. S. Schutt



BORN in Milwaukee, Wis.; educated in Public Schools there. First position was that of meter reader for the Milwaukee Gas Light Company after which had office position. Then was chief clerk for the Beloit Electric Company, and from Beloit went as commercial manager of the Hammond, Ind., Gas and Electric Company. In 1904 became manager of the Chicago Heights Gas Company, and in 1906 was made manager of the Michigan City, Ind., Gas and Electric Company. From 1909 to 1913 was manager of the Wilmington Gas Company, Wilmington, Del. From 1913 until the present time has been vice-president and general manager of The C. H. Geist Company, Philadelphia, Pa. Is also a director and vice-president of Atlantic City Gas Company, Wilmington Gas Company, Peoples Gas Company, Roanoke Gas Light Company, Indianapolis Water Company, Philadelphia Suburban Water Company, New York Inter-Urban Water Company, Clayton-Glassboro Water Company, Jenkintown Water Company, Moreland Springs Water Company and American Pipe and Construction Company. Has served as director of the American Gas Association, and vice-chairman of Commercial Section, and vice-president of the Eastern States Gas Conference.

AMERICAN GAS ASSOCIATION MONTHLY

Vol. IX

JUNE, 1927

No. 6

Propose to Merge N. G. A. with A. G. A.

Natural Gas Association Will Become Natural Gas Department of American Gas Association

WHEN this is read by the members of the American Gas Association, it is probable that the proposed amalgamation of the A. G. A. with the Natural Gas Association of America will have been ratified by the Executive Board of the A. G. A.

The first definite step toward merging the two associations was taken by the Natural Gas Association at its 22nd annual convention at Cincinnati, Ohio, on May 10, when a resolution to combine was unanimously passed.

The text of the N. G. A. resolution is as follows:

"Resolved, that the report of the Committee on Affiliation of the Natural Gas Association and the American Gas Association be approved and presented by the Chairman of the Committee to the Association at this convention, with the following resolution:

"BE IT RESOLVED, By the Natural Gas Association of America in convention assembled:

"1. That the report of the Committee on Affiliation be, and the same is hereby adopted and ratified.

"2. That the incoming officers and the Board of Directors elected at this Association meeting be directed to complete the amalgamation of the two Associations under the general provisions as set

forth in the recommendations of said Committee, and to surrender the charter of the Natural Gas Association of America.

"3. Any surplus funds that may be on hand after completing the closing out of the Natural Gas Association be used for such purposes as the newly created Natural Gas Department may authorize."

The Natural Gas Association committee on the desirability of the affiliation, consisting of H. C. Cooper, Raymond Cross, R. W. Gallagher and A. W. Robertson, had agreed upon a tentative basis of amalgamation with the A. G. A. committee, the members of which were, Harry C. Abell, George N. Whitwell, and Clare N. Stannard.

Both committees decided that the correlation of activities of all branches of the manufactured and natural gas associations would be for the common good of the industries.

Activities such as the \$500,000 research fund of the American Gas Association to develop efficient appliances for the utilization of gas in industry would be impractical to duplicate. Naturally, an affiliation of the two associations would allow both industries to participate in the benefits resulting from this research work.

The work of the Testing Laboratory

*H. C. Abell**C. N. Stannard**G. N. Whitwell*

was considered in the same light. The Natural Gas Association has contributed \$5000 for the support of the laboratory program.

The work of the Commercial and Accounting Sections of the American Gas Association is such that the members of both industries may realize benefits equally. The active accounting work undertaken and the comprehensive and constructive nation-wide program for the stimulation of gas sales can well be applied to cover the natural gas territories as well as the manufactured.

Of special interest to the Natural Gas Association is the work started by the Technical Section of the A. G. A. to conduct research in the mixing of gases of various kinds, and a study of the adaptability of these gases in both industrial and domestic appliances. The natural gas industry will find this work of inestimable value whenever it becomes necessary to augment the present supply of natural gas with the manufactured product.

The study of rate structures and gas distribution problems are also similar in nature to the above. The Natural Gas Association has been spending between \$30,000 and \$40,000 a year for its activities, whereas the American Gas Association is expending appropriations upward of \$500,000 a year. Investigation has shown that practically all the problems in the natural gas industry are similar to those of the manufactured gas industry, with the possible exception of matters pertaining to the production of gas.

The Natural Gas Association was organized in Pittsburgh in 1906, and has held annual conventions since that time. The organization's proceedings for 1925 give the membership as 100 company members and 1,800 individual members, all classes. Among some of the larger company members are: Equitable Gas Company, Hope Natural Gas Company, Manufacturers' Light & Heat Company, Ohio Fuel Company, and Peoples Natural Gas Company, all of Pittsburgh; United Fuel Gas Company, and Columbia Gas & Electric Company, of Charleston, West Virginia; the East Ohio Gas Company, Cleveland; Logan Gas Company, Columbia, Ohio; Lone Star Gas Company, Dallas, Texas; Oklahoma Natural Gas Corporation, Tulsa, Okla.; and the United Natural Gas Company, Oil City, Pa.

According to statistics made public by the Geological Survey for 1924, the latest available at A. G. A. Headquarters, the natural gas industry for that year produced 1,141,482,000,000 cu.ft. of gas. Nearly three and a half million domestic customers consumed 285,000,000,000 cu. ft. at an average price of 54 cents per thousand, and 856,330,000,000 cu.ft. were consumed by about 18,000 industrial customers, including all users, at an average price of 11.6 cents per thousand.

In Memoriam

*George Williams, Henry L. Doherty & Co.,
New York, N. Y.*

Annual Convention to Be Held at Chicago

Windy City Will Be the Gas Man's Center of Interest
the Week of October 10th



The famous water-front skyline of Chicago. The newly completed Hotel Stevens is in the foreground

THE ninth annual convention of the American Gas Association will be held in Chicago, Ill., October 10 to 14, with the Stevens Hotel, the largest hotel in the world, as the seat of action. After meeting for five consecutive years at Atlantic City, N. J., the entire industry welcomed the decision to have a convention in the Middle West.

The five years that have intervened since the last Chicago meeting have been epoch-making for the gas industry. No doubt, the program for the convention will reflect the remarkable strides that have been made, and will be particularly valuable to many members of the Association living in the Middle West who have not been able to attend the Atlantic City sessions and study the remarkable exhibitions that have been held there.

The Stevens Hotel, which has just been completed within the past few weeks, will be an ideal place for the convention. While the exhibition space will be rather

limited, the Committee in charge expects that each manufacturer will make his space requirements as conservative as possible in order to allow for the increased number of exhibitors.

The Hotel Stevens has 3000 rooms and 3000 baths, but despite its size it will not be able to accommodate all who attend. Other excellent hotels are within easy walking distance of the Stevens, which will be convention headquarters during the week of October 10th.

Although it is too early to make any definite announcements concerning the convention, a program committee has been appointed. This method of handling the convention has proved especially successful for the past two years, as it makes possible a unified program covering every subject of interest and importance to the industry.

Pertinent announcements about the convention will be given in future issues of the MONTHLY.



The Municipal Pier, a landmark of Chicago

Chicago has just reason to be proud of its climate. Statistics show that Chicago has its full share of pleasant days, a fact which its residents know without the aid of figures.

Chicago has a fleet of pleasure boats on Lake Michigan that are a source of recreation and health to increasing thousands each year, and few cities offer more numerous and more pleasant boat trips than does Chicago. One can choose between a half-hour ride and a voyage of weeks.

Another feature of life on the lake is the innumerable private boats, large and small, that decorate the seascape on pleasant afternoons. All along the shore are boat clubs, sailing boat, power boat and canoe, that are a joy to thousands from the coming of summer till the last day of fall.

Chief among the points of interest outside of, but still near to the city, are Fort Sheridan—Chicago's military post—and the Great Lakes Naval Training Station, both directly north; the Sand Dunes, extending southeastward along the shore of Lake Michigan; and the twenty thousand acres of forest preserve which surround the city.

AMUSEMENT

As a center for dramatic production it may be said that some of the most successful of America's productions acknowledge Chicago as their birthplace.

From an artistic standpoint the Chicago Grand Opera stands out as a leader noted for its many great stars, its interesting and varied repertoire in English, German, French and Italian, its wonderful scenic productions and its modernized ballet.

Chicago points with pride to Orchestra Hall and the high-grade musical programs that appear there, and especially to the Chicago Symphony Orchestra.

Chicago has four tremendous outdoor amusement parks—Ravinia, Riverview, White City and Forest Park.

Its vaudeville houses are daily entertaining thousands of people. Chicago has often been called the city of hustle and work, but at the same time it is a city of people who play, a fact which enables the people to do their work well.

FACTS AND FIGURES

The Chicago spirit is the secret of the city's greatness. It was the Chicago spirit that made possible the many activities for the advancement of the city. It built the drainage channel, the parks and boulevards, the forest preserves, the libraries and museums and the numerous other achievements and places of interest. Chicago has shown its greatness most clearly in times of disaster. In October, 1871, the heart of the city was wiped out by the great fire and the manner in which Chicago laid the foundation of the magnificent metropolis of today in the ruins of

(Continued on page 368)

The Convention Hotel is a "Gas Hotel"

Hotel Stevens, To Be Scene of 9th Annual Convention, is Completely Equipped With Gas; Ample Facilities Available for Meeting

By J. E. DAVIES

The Peoples Gas Light and Coke Company

GAS men of the entire country, and indeed of all the world, will take pardonable pride in the fact that the world's largest hotel, The Stevens, which opened in Chicago, May 2, is "all gas" in the kitchens and bake shops.

Particular interest attaches to the fact that this huge gas installation may be viewed at close range by all who attend the 1927 meeting of the American Gas Association, to be held in Hotel Stevens, October 10 to 14. The whole convention and the attendant exhibit of appliances and equipment will be housed under the roof of this giant hotel—a statement which calls for details as to its facilities for accommodating comfortably and successfully so large an enterprise as the American Gas Association convention.

The Hotel Stevens has 3000 rooms—all outside rooms—and 3000 baths. It is larger by 800 rooms than the Pennsylvania in New York. Were one to sleep in a different room each night, he could do so for eight years without repeating.

In sequence we shall attack the features that will appeal most to the men interested in the coming convention. We seek, therefore, the basement level—a flight down from the main floor or street level of the main floor, and 12 feet below grade where we find the Exhibit Hall, with a total of 35,000 square feet.



The Hotel Stevens

Exhibitors of gas equipment and appliances will find installed there 70 cabinets in convenient locations. In various of these cabinets the exhibitor will find for his use gas, electricity, compressed air, steam, hot and cold water, and telephone. There are drains in 70 locations. The exhibitor can develop

the use of these utilities to the maximum.

A 20-ton capacity elevator serves the exhibition hall. It is 11 feet wide and 29 feet long. Large trucks with their load of exhibition material may be driven on the elevator and into the exhibition room under their own power. They may be unloaded with greatest economy of time and labor. This elevator operates from grade to the ballroom level on the second floor, and to the Exhibit Hall in the basement. The basement level is reached by all the 14 resident elevators in the hotel.

The convenience of those attending is considered in the planning of the basement, where are also found the barber shop, the public stenographers, and manicure. A large and beautifully appointed lunch room furnishes quick service at popular price.

The arrangements on the first and second floors also have reference to the convenience of those attending such a gathering as the "A. G. A." They are such that large convention dinner func-



Views of the Hotel Stevens' kitchens: Gas-fired equipment in the main kitchen, banquet kitchens, etc., is shown. The hotel is "all gas"; just the place for the Ninth Annual Convention, October 10 to 14

tions or balls can be held in the Stevens in much the same fashion as if held in a club or private building. The guests may enter the hotel at the Eighth Street entrance and, immediately inside, find the check room and rest room areas—calculated to care for 5000 guests. They may then proceed a few paces to a broad private stairway entrance, rising to the ballroom (convention room) level without the necessity of going through any department of the hotel. This is another feature of the Stevens Hotel operation not found in any other hostelry and has already met with the popular approval of many local organizations desiring the utmost privacy in the operation of their functions, at which the attendance is limited to invited guests.

There will be many sectional meetings at the A. G. A. convention. These will be splendidly accommodated on the third floor, which contains seven ballrooms, ranging in size from a seating capacity of from 100 to 700 persons. In addition to these, there are private dining rooms of various sizes, each of which has individuality in its construction and decoration.

As a complement to the main Exhibit Hall, the fifth floor is entirely given to merchandise display rooms, which are equipped with tables for display of merchandise and comfortable davenports and easy chairs for use of exhibitors and their customers. These rooms are also equipped with disappearing beds. There is an extensive and distributive lighting system for every room, as well as a full complement of service outlets for auxiliary lighting.

This convention of gas men is going to be so big that the ballroom also will be used for exhibition purposes. The general sessions will be held in the Eighth Street Theater, which the Stevens company owns. It is reached by a bridge direct from the ballroom.

The guests' floors of the Stevens Hotel range from the sixth to the 25th inclusive and contain 134 rooms on each floor. Every floor is served by two floor clerks,

working in shifts with the assistance of a stenographer. The floor clerks' desks, in the Stevens, are different from those found in any other hotel in the country,—particularly in the point that two positions are provided, for the floor clerk and the stenographer.

Every floor clerk will be the official contact between the hotel management and the guest. It must be borne in mind that each floor ordinarily would, in many cases, constitute a complete hotel of 134 rooms.

SERVICE BUILDING SEPARATE STRUCTURE

The Service building, a separate structure, occupies a frontage of 80 feet on Wabash Avenue and extends to the alley at a point midway between Seventh and Eighth Streets, where it is connected to the hotel on every floor by bridges. The Service building contains—on the first floor, a driveway, under roof, permitting of deliveries of supplies, exhibit material and guests' property, without possibility of damage from the elements. In addition, the arrangement happily relieves the possibility of street congestion in the area of the hotel proper.

The principal features of the Service building are refrigerating equipment, the laundry and the bake shop (with gas bake ovens exclusively), which are installations of surprising magnitude and utility.

All of the services required to operate the hotel and care for the needs of the guests are housed in the Service building, with the exception of the power plant and the kitchen. Numbering among these departments, not previously mentioned, are the carpenter shop, upholstery department, sewing room, ice cream department, candy room, and valet department.

RECREATION ROOM FOR CHILDREN

The service room also houses a recreational room which is equipped with play ground apparatus, toys, books, and other accoutrements which will provide continued interest for children left under competent supervision by parents, the guests of the hotel, who are busy with

their convention, shopping, or other program during the various hours of the day.

Another feature of interest is the specially designed facilities for care of domestic pets, with separate kitchen equipment designed to meet the needs of the most exacting.

Two floors of the Service building are devoted to recreation facilities for adults, such as a gymnasium, bowling alley, billiards, etc.

A FEW GLIMPSES OF SIZE

The Bedford stone, used in the "trim" alone, is more than that used in the entire group of Medical Buildings at the University of Chicago.

The Hotel Stevens has the largest ballroom in the world—189 by 85 feet in dimension, with 15,000 square feet of floor, and a balcony eight feet wide.

It has the largest checkroom in the world, with facilities for checking the wraps of 3000 people. There are also special "make-up" rooms for women.

The Stevens has the three largest Oriental rugs in the world; and \$600,000 worth of carpets. This was the world's largest carpet order.

The largest plumbing contract in the world was signed for this hotel. Sixty carloads of mattresses, and two carloads of glassware—both record-breaking orders—were purchased.

The Hotel Stevens has a circulating library of 6000 volumes, with Gertrude M. Clark, for thirteen years librarian at the University of Chicago, in charge.

A TRIUMPH FOR GAS

But even beyond the facilities for their comfort and convenience in the Stevens Hotel, gas men are interested in the fact that this, the largest hotel in the world, has kitchens that are all-gas. All the ranges, broilers, roasters, and bake ovens are gas-fired, besides any number of special appliances. There are 36 sections of hotel gas ranges. There are twelve 30-inch gas-fired broilers, seven 30-inch

gas-fired roast ovens, five ten-by-twelve bake ovens, one special bake oven, besides any number of hot plates, chicken singers, and waffle irons all fired by gas.

A departure from accepted practice in most hotel kitchens in America is the location of ranges and broilers in the center of the kitchen with cooks' tables on each side, forming a hollow square. Many large European hotels, it is said, employ this type of layout with great success.

The gas company's hotel and restaurant engineers were called in for assistance and recommendations as to proper installation of piping, type, position, efficiency, and functioning of appliances, etc.

It took eight weeks to write the specifications and five months to prepare the details and designs of the equipment for the hotel. Practically all of the special equipment is constructed of metal of extra heavy gauges and it is stated that the equipment, as constructed, is the heaviest and most serviceable that has ever been placed in a hotel.

The relation that the culinary or manufacturing end bears to the serving or "selling" facility of the business deserves a word here. There are two dining rooms on the main floor—the coffee shop or lunch room, and the Colchester grill, or table d'hôte dining room, the former seating about 250 people and the latter about 500. Between these dining rooms is a kitchen arranged for double service with an individual dish pantry for each dining room, permitting the use of different patterns of china and silverware.

The main dining room on the second floor, seating approximately 1000 people, and the grand banquet hall, with a capacity for 2000, have their own kitchen located between the two dining rooms. One of the novel features of the banquet service is the utilization of portable trucks for salad service. A special refrigerator has been provided which will accommodate seven of these trucks. The trucks are two feet wide, six feet long and are nine shelves in height. The entire salad

(Continued on page 364)

Visualize the Job to the Employee

Photographs Are a Valuable Aid in the Selection and Placement of Employees at Baltimore, Md.

By GEORGE D. PENNIMAN, JR.

Assistant Manager, Employment and Personnel Department, Consolidated Gas, Electric Light and Power Company of Baltimore

HOW would you like to be a gas fitter's apprentice in our fitting department?" The average eligible applicant for employment who is asked this question answers only as most of us would, "What is a gas fitter's apprentice? What does he do?"

The same answer is given by applicants who are asked about almost any of our plant or operating positions. They do not know, and it is the problem of the employment department to familiarize them with at least a general idea of the duties and possibilities of the various operating occupations. Photographs, some of which illustrate this article, are being used in Baltimore and have been found to be a valuable aid in this work.

Figure 1 is a general view of the display board used for this purpose. Figures 2 and 3 show individual sections given over to sets of photographs of these different operating occupations.

The method followed is outlined as follows:

First, the applicant's general qualifications for employment are ascertained by an interviewer. Then he is directed to the board displaying a group of photographs titled "apprenticeship." On this board are shown twelve occupations for which we frequently employ young men who are interested in learning a trade. The interviewer points out to the applicant the pictures of certain occupations for which he feels the applicant is fitted by education and general physical qualifications.

Let us assume that an applicant, after looking over the designated photographs, selects the picture showing the work of a gas fitter's apprentice as the type of employment most interesting and congenial to him. He is then directed to the board on which the gas fitter's apprentice's duties are pictured in more detail. On



Fig. 1: Display board that "visualizes" the job



Fig. 2: Section of photographs that shows the work to the prospective employee

this board is a promotional chart showing the classifications through which the apprentice must go before being qualified as a first grade fitter, and photographs of some of the various duties and class room work of an apprentice while under instruction.

If the applicant finds that the work of a gas fitter's apprentice as revealed to him by these photographs for certain reasons does not appeal to him, he turns again to the "apprenticeship" board and selects another occupation to study. This he does until he finds the occupation for which he feels he is inherently suited. When this selection has been made, the interviewer explains in detail the duties, responsibilities, hours, rate of pay, and other information about the job.

The applicant then more intelligently can answer the question, "How would you like to be a gas fitter's apprentice in our fitting department?"

The photographs are useful not only as an aid in selecting the "right man for the right job," in the belief that a man

will put his best efforts into a job wherein his greatest interest lies, but also in many other ways.

Department heads find that much time is saved for them and they can hold a more satisfactory interview with an applicant who has already seen the picture story of the job before being submitted.

An intimate knowledge of conditions before starting to work obviates the chances of a new employee becoming dissatisfied and resigning because of a personal dislike for certain working conditions he might encounter. Similarly, knowing the future possibilities for advancement on the job encourages the new employee sufficiently to tide him through the trying period of training. These and other factors tend to minimize costly turnover.

Department heads have cooperated with us in the taking and titling of these photographs, appreciating not only that the plan is valuable as already described, but also that a complete knowledge of

(Continued on page 364)



Fig. 3: Another section of photographs

A New Sales Policy and What It Did

Among Other Things It Reduced the Inventory to 30 Per Cent of What It Had Been Despite Growth of City

By LEONARD FITZGERALD

Vice-President, Gary Heat, Light & Water Co., Gary, Ind.

THE present merchandising method of the Gary Heat, Light & Water Company was adopted in 1921. Prior to that time, it was the policy to purchase commodities, handled for sale, in relatively large quantities resulting in the accumulation of a large inventory in the year 1920 when business conditions became suddenly unsettled.

The sales organization was composed of men recognized as the high pressure type, with a strong desire to place large orders on the books without giving sufficient attention to their ability to live up to all of their promises to the customers.

"THE CUSTOMER MUST BE SERVED" AS A CREED FOR SALESMEN

During the depression in business activity in 1920 and 1921, the sales organization was materially reduced. When business revived in the latter part of 1921 and the personnel of the sales organization was increased, salesmen of a more conservative type were selected, the policy of the company being to employ salesmen who realized a successful salesman must serve his trade by studying carefully the requirements of each customer and offering the equipment most suitable for each individual case.



The message of the salesman should be service. An incinerator is not bought; safe and sane disposal of garbage is. The above is a particularly interesting window of the Consolidated Gas Co. of N. Y.

Under the old system, the salesmen were paid a salary and commission, the commission not applying on sales made in the sales office unless the salesman had called upon the customer thirty days prior to the date of the sale. This system necessitated much book-keeping and a complicated system of card records.

Under the new system, now in force, the city is divided into five districts, each of about 20,000 population and as nearly equal as possible, and a salesman is assigned to each district. Each salesman is credited and paid a commission on all sales made in his territory whether he conducts the transaction in the field or on the sales floor. Each salesman is paid a monthly salary in addition to his commission, which enables an active man, possessing salesmanship ability, when working in a population of approximately 20,000, to net a very satisfactory income.

The sales organization is supported by newspaper and billboard advertising.

The system has proved satisfactory since its adoption, and the salesmen employed at the present time have been with the company a number of years.

Although the population of the city of Gary has more than doubled since the year 1920 and merchandise sales have kept pace with the growth of the city, the merchandise inventory has been reduced

to 30 per cent of the amount formerly carried. The decrease in inventory has been brought about largely by purchasing commodities, carried in all lines, in much smaller quantities than formerly. Being in close proximity to the Chicago market, it is possible to obtain quick deliveries from Chicago stocks. It is not unusual for a salesman to enter a new territory, where gas mains are being extended, and obtain a large number of new customers for gas connections and stoves and deliver the stoves by truck direct from the Chicago warehouses of the stove companies to the customers' premises, thereby avoiding all intermediate handling and store room costs.

It is expected that a large merchandise business will be transacted by our company during 1927, with an average inventory of less than 20 per cent of the gross sales.

RE-DISTRICTING

As the city of Gary is growing rapidly, it is necessary from time to time to re-district the city and increase the number of salesmen. In doing this, we endeavor to keep the districts equal as to number of population. When re-districting is necessary, the older salesmen are given their choice of territory and new men are assigned the remaining sections. To some, a sales district of 20,000 population may seem large, but based on our experience in a manufacturing city with a mixed population such as Gary, this number is not excessive.

Possibly a larger volume of business could be developed by increasing the sales force and reducing the size of the sales districts. Our policy, however, is not to force sales, but to study the actual needs of our customers and cater to them to the fullest extent. An intensive merchandising policy would possibly injure the business of the small dealer and contractor, with whom it is our policy to cooperate.

W. R. Addicks Addresses Men at Johns Hopkins

WALTER R. ADDICKS, Senior Vice-president of the Consolidated Gas Company of New York, lectured on "The Gas Supply of a Modern City—Today and Tomorrow" before the advanced students in the School of Engineering at Johns Hopkins University at Baltimore, Md., on May 5, 1927, under the auspices of the Committee on Cooperation with Educational Institutions of the American Gas Association. Mr. Addicks gave a most interesting lecture illustrated by lantern slides and moving pictures.

In the evening he addressed an educational group of the Consolidated Gas Electric Light and Power Company of Baltimore.

Gas Egg Washing Machine Proves Efficient

AN interesting application of manufactured gas in industry is its use for egg washing in a large poultry producers' establishment in Portland, Oregon. The automatic, gas-heated egg washing machine has a capacity of 275 cases a day. The machine is equipped with six burners, consuming 130 cu.ft. of gas an hour. It is operated by a crew of eight girls.

Some idea of the saving in time effected by this machine can be gained from the fact that were this work done by hand, a crew of ten girls could wash only 20 cases a day, or two cases each, while the capacity of the machine is 34 cases an operator.

The eggs are placed in the lower rack and travel through steaming water and revolving brushes up to the top deck where they are dried by a fan. They are then ready for packing.



The eggs that go through this gas-fired washer are clean

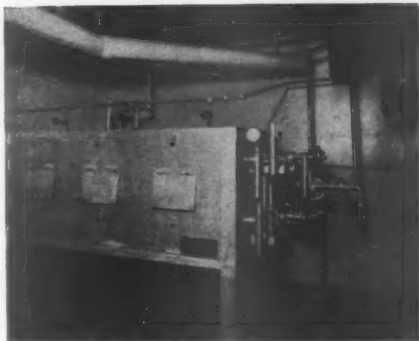
Research Develops a New Partnership

The A. G. A. Establishes a Fellowship at the A. I. B.
to Solve Problems of Bread Baking

MANY fine contributions to the welfare of the baking industry are coming from sources which only a few years ago were far removed from the bakery. For several years a number of industrial fellowships have been carried on at American Institute of Baking.

The latest fellowship to be established is that provided by the American Gas Association. The research undertaken by the American Gas Association at American Institute of Baking concerns the problems common to both industries. Up to this time the bakers have had no authentic information relating to the cost and effects of the different fuels or of the characteristics of the different types of ovens.

The Fellowship at American Institute of Baking is an expression from the gas industry to the baking industry of its desire to collect all basic facts relating to the oven problems and to use those facts as the basis of rendering and developing a more efficient service. With that understanding a program of research has been set up to determine first those facts which concern the different types of fuels. For example, does the type of heat as represented by an indirect coke-fired oven differ from the type of heat generated by a gas flame or by an electric heating element as far as the bread itself is concerned? After these determinations have been carried through to



View of the experimental oven used in baking research

a conclusion, the next phase of the research will concern more particularly the problems relating to the oven construction, such as materials, baking chamber dimensions, the atmospheres, and, in the case of the conveyor ovens, the temperature gradients and atmospheres.

The facts brought out by these tests will not be left merely in technical form but will be substantiated or disproved on a commercial scale and under shop conditions. It is not expected that these results will receive an immediate acceptance on their face value. However, it is hoped that universal acceptance will be given to the principle that this method of coordinating the work between these important industries is the correct basis for progress and development.

There are so many problems involved in a study of this kind that the results will not soon be available for publication. The gas and baking industries will, however, be interested in a brief description of the ovens in which the different types of heat are applied to bread baking.

In investigating the proper method of applying heat and the effect of various conditions in the baking process, it is necessary to control conditions so as to vary one factor at a time. Accordingly an experimental oven was built, having three small ovens in the one shell, each having a different type of heat application.

The outer shell is approximately seven feet long by five feet deep by three feet high, standing about three feet from the floor. The oven compartments themselves are fourteen inches wide, twenty-seven inches deep by approximately twenty-one inches high. They were designed to hold one strap of four loaves each.

The outer shell is insulated by two to five inches of insulating brick and there is nine inches of fire brick between each oven. A transite slab is suspended in the center of each oven as a hearth.

In recording the data the ovens have been numbered from left to right as one faces them. Number one oven has a diaphragm burner in the center of the top and of the bottom. The flues are a few inches to the left of the top burner. The heat therefore is primarily by radiation from incandescent surfaces, although the flue gases from the lower burner come up around the bread.

Number two oven is heated primarily by convection. A tunnel burner placed toward the back of the right end of the oven discharges its flue gases under the hearth. These gases come up around the bread and supply the heat for its baking. The flues are in the center line of the top of the oven.

Number three oven is heated by an indirect system. Lava tip burners outside the oven fire into U-bends placed near the bottom and the top of the oven. Heating, therefore, is by convection currents in the oven atmosphere and by low temperature radiation from the pipes themselves. No products of combustion enter this oven and there is no opening other than the oven door.

Each oven is equipped with a pyrometer couple. These enter at the back of the ovens at such height as to be only a short distance above the loaves. Temperatures are read on an indicating pyrometer.

A separate gas meter is provided for each oven, with special dials enabling the gas consumption to be read to the cubic

foot. In order to facilitate regulation of the burner mixtures and of the heat supplied, surface combustion low pressure inspirators are used on all burners.

The ovens are at present constructed of fire brick. It is expected, however, that they will be rebuilt from time to time to test the effect of other materials on the product. The design is such as to facilitate tests of various conditions in the oven and to allow ready changes in the ovens themselves.

R. A. Wight, a chemical engineer with much experience in fuel problems, has been assigned to the investigation by the American Gas Association. Malcolm Reeser of the Institute staff represents the Institute in the carrying on of the studies.

Mr. Wight received the B.S. Degree in Chemical Engineering from Armour Institute of Technology in 1907. In 1918 the Degree of Chemical Engineer was conferred upon him. He has had many years of experience as a chemist and efficiency engineer. For five years he was Assistant Engineer of the Illinois Commerce Commission, working chiefly on problems of gas service. Before coming to the Institute, Mr. Wight was conducting research on bake oven problems for the Surface Combustion Co.

NEW ENGLAND FAVORS SLOGAN "THE RIGHT FUEL IS GAS"

MORE than 600 slogans were submitted in the slogan contest held recently by the New England Gas Association. The results were announced at the annual meeting of the Gas Sales Division on May 13, by Jesse L. Johnson, Providence, R. I., chairman of the slogan committee.

First prize of \$50 was given to J. R. Gibbons, Worcester Gas Co., for "The right fuel is gas."

Second prize of \$30 was given to R. L. Fletcher, Providence Gas Co., for "Controlled heat for home and factory."

Third prize of \$20 was given to Madeline Durfee, Providence Gas Co., for "For those who want the best—gas."



Radio broadcasting is a recent activity of home service. On the left is Miss E. H. Gregory, of Fall River, Mass., broadcasting over WSAR. On the right is Miss Anna Barrows broadcasting over WEA for the Greater New York Gas Companies

Does Home Service Affect Gas Sales?

An Actual Comparison of Figures That Shows a
Trend of Importance to Gas Executives

By C. C. CURTIS

Vice-President, Fall River Gas Works Co., Fall River, Mass.

ONE section of the report of the Home Service Committee of the American Gas Association for 1926 considered the question, "What results can we show today for Home Service Work?" It was pointed out that there are very obvious difficulties in the way of arriving at any exact measure in dollars and cents of increased gas or merchandise sales resulting from home service work, but the hope was expressed that some way might be found to check up results and secure tangible evidence which would be convincing.

The writer is one of many who believes thoroughly in the many benefits which accrue to a gas company through the operations of a good home service department. The results of advertising are usually difficult to check up exactly, but most of us know—or at least think we know—it is worth while. We take many things for granted, and, yet, whenever it

is possible to get any direct measure of results accomplished by advertising, we would be poor business men indeed if we didn't try to find out what those direct results were.

So, with a home service department, let us accept it as a valuable ally in maintaining and increasing the good will of our domestic customers, as a source of friendly personal contact between the gas company and our women customers, as a sort of consulting domestic engineering department representing our customers as well as our company, feeling sure that it is worth while, and then, on top of all that, see if we can show that this work results in increased use of gas with attendant mutual satisfaction to customer and company.

The Fall River Gas Works Company established a home service department in September, 1924. A so-called "first course" of lecture demonstrations was



The demonstration of oven heat control is but one of the duties of the director

given in our own assembly room, beginning November 18, 1924. This "first course," called "From Soup to Nuts," consisted of ten weekly lessons.

This "first course" was repeated eight times between November, 1924, and March, 1926, and the attendance varied between 93 and 45, with an average somewhere in the neighborhood of 75 or 80. Admission was granted only to women who had previously registered for the class and so it has been possible for us to investigate the effect of their attendance on the gas consumed in their households.

Within the past month the job was delegated to our accounting department to analyze the accounts of one hundred women who had taken this "first course," to compare the consumption of gas in these households for the twelve months' period prior to starting the course with the corresponding period of twelve months subsequent to starting the course, see what the net result was and then compare the consumption of gas for similar periods of time in nearby households from which so far as we know there had been no attendant at the home service lecture demonstrations.

The work has been done, and in the hope that other companies will undertake a similar study the figures are presented for what they may be worth.

From a card file containing the names

of some 250 or 300 women who attended one of the early series of the so-called "first course," a member of the accounting department picked at random 100 cards. Reference was then made to our customers' ledgers and sheets made up similar to these.

Mrs. G. Walter Taylor Started Course—Oct. 21, 1925.
802 Walnut Street, Course Taken—Soup to Nuts.
Fall River, Mass. No. of Lessons—10.

Month	1924—\$3.75	1925—\$4.63
October	2.88	3.63
November	2.88	3.88
December	2.75	4.13
January	3.00	2.63
February	3.00	3.00
March	3.50	3.38
April	3.75	4.01
May	3.88	5.25
June	4.38	4.00
July	4.13	3.75
August	4.50	4.13
September		

Totals Net Inc. \$3.40 \$43.02 \$46.42

(Due to causes such as incomplete records or customers moving away, fifteen cards had to be eliminated, so we obtained final records of only eighty-five.)

After comparisons had been made in this way and the total summed up, a member of the accounting department selected at random one or two domestic customers' names from each of our forty-eight customers' ledgers. In this selection no attempt was made to obtain representative types of customers, except to make sure that the customer did not appear on our records as an attendant at our home service classes. The work was done without any assistance on the part of the home service or sales departments and we believe was as fair as any sampling could be. Eighty-five names were selected in this way and the consumption of gas in their households was then found

(Continued on page 378)



Work with girl scouts is proving very successful

Problems of Public Utility Education In the Social Sciences

By HORACE M. GRAY, Ph.D.

Department of Economics, University of Illinois

THE statement has been made frequently that, inasmuch as the utility industries are primarily technical, they offer little opportunity for study by a student of the social sciences. If this view be sound, it would seem a waste of effort to proceed farther with the present program of studying the utility industries from the economic or social side.

The present program, however, does not seem to be as futile as might at first be supposed. The belief that education in the social sciences is useless for the public utilities is founded upon three rather questionable assumptions: First, that the one purpose of such education is to prepare men to enter the utility business; second, that all students now studying the economics of utilities will subsequently enter the utility business; third, that the technical nature of the utility industries will preclude these young men from finding any place in this business.

The first two of these assumptions owe their prevalence to a general misunderstanding of the educational policy of public institutions. As I shall attempt to show later, training for the service industries is not the only purpose of the present educational program. There are other purposes of a broader and more public nature which must be recognized.

COINCIDENT with the transition of public utilities from relatively small concerns to large-scale enterprises has come the development of organized college courses in the economics of public utilities. Our readers know of the changes in the gas industry from 1900 to the present day, changes that brought out the growing importance of gas companies as economic institutions. Today conservation, complex financial structure, and various other legal, social, economic, and political problems have interested the educational institutions in the public utility industry. Since it has been only within the last two years that these institutions have begun to organize their efforts into a systematic and scientific educational plan, there is need for the dissemination of pertinent information.

In this article Professor Gray has given our readers a remarkably clear description of education from the college viewpoint. He writes with the knowledge of conditions at the University of Illinois.—Editor.

The second assumption, that all men taking courses in the economics of public utilities eventually enter the utility business, is not in keeping with the facts. Although a goodly proportion of these students do take positions with utility companies, many of them drift into other employments. An educational program must be broad enough to cover the needs of these non-professional students. For this reason, it cannot be exclusively technical without becoming unattractive to many students who,

although not intending to enter the business, might well profit from such studies. An obvious and practical way to avoid this difficulty is to give broad foundation courses for those seeking merely general information and more technical courses for those desiring specialized knowledge.

The third assumption is faulty in that it dismisses too lightly certain non-technical problems of equal importance with the technical ones. It is probably true that in the natural order of things improvements in the mechanical arts arise out of man's inherent creative ability spurred on by economic necessity or the lure of profits. It is equally true, however, that the introduction of such mechanical improvements into the life of a highly complex society creates numerous economic, legal, social, and political prob-

lems. These resolve themselves into questions of the use of such mechanical forces of production, and the control, ownership, administration, and distribution of the benefits therefrom. Who can say that these problems are of less ultimate significance to utilities than are those with which utility engineers struggle? Unless these issues are met and disposed of to the best interest of society as a whole, the new instruments of production, instead of constituting an addition to human well-being, may actually result in detriment.

That the genius of America for mechanics may be directed into channels of the greatest good to society, it is essential that there be a close coordination of effort between the engineer and the administrator. From time immemorial these two types have held common counsel in every state and in every business institution that has left its mark on the pages of history. Their functions are complementary. The engineer, engrossed as he is in the mechanical arts, may build blindly and to no purpose unless supported by the counsel of the man of affairs. The administrator, on the other hand, if out of contact with the realities of engineering science, may become lost in a maze of fanciful impracticalities or, conversely, sink into a lethargic conservatism.

It is the belief of those of us engaged in public utility education on the social science side that such coordination of effort is possible and that it can be aided by instructing young men in such branches of knowledge as economics, law, politics, and social relationships. Such training it is hoped will place students of the social sciences on a par with the technically trained men so that the two groups may cooperate more fully.

THE PROPER POINT OF VIEW

Of all the problems confronting the man who undertakes to conduct courses in the economics of public utilities there is none, in my estimation, so fundamentally important as that of establishing a

proper point of view from which to survey the subject. In no field of economic discussion is there such a manifest tendency to adopt a prejudiced point of view as in that of public utilities. It is only rarely that one encounters a writer, a speaker, or a teacher who will avoid meticulously the ever present temptation to depart from an impartial and scientific point of view in order to descend into the list of disputation and special pleading. So true to life is this tendency to forsake the neutral point of view that men almost instinctively classify writers on utility subjects as "utility" or "anti-utility" advocates. Loath as I am to admit the validity of this instinctive classification, I am inclined to believe that it is generally correct.

It has been said that if one would understand a man's conclusions, one should first analyse his original assumptions. If one assumes that utilities are complete monopolies, that private monopolies are inherently evil, that profit seeking is morally evil and economically destructive, that there is no alternative except to conclude that private monopolies ought to be displaced and profit seeking suppressed. Furthermore, if two corollary assumptions be introduced, namely: That public monopolies are inherently good, and that profit seeking can be suppressed, then nothing remains except to conclude that private monopolies should be displaced by public ones, or, what amounts to nearly the same thing, that the legal fiction of private ownership be retained but that profit seeking be suppressed completely. These, in brief, are some of the all-inclusive assumptions and inevitable conclusions of many who essay to write and speak with authority on public utility questions.

On the other hand, there are those who insist that private property is sacred, that profit seeking cannot be suppressed because it is inherent in man's nature, that it ought not to be suppressed because it is the source of all economic benefits, that private monopoly is the ideal status for

public utilities, and that any form of public control is economically unsound. In the fact of such assumptions it is little wonder that the tenants of such views look upon those who think otherwise as vacuous dreamers, or socialistic agitators with ulterior designs on our economic institutions. It is indeed a mild classification which includes the holders of such assumptions in the category of the "utility" interests.

Both of the above views are extreme and can end only in confusing the mind of the student and plunging him into a Babel of infinite disputation. The source of their error lies in the use of all-inclusive assumptions, most of which are not true in all particulars, but any of which precludes further investigation of factual data. No scientific investigator would willfully attack a problem by first making a series of assumptions which close all avenues for future investigation. On the contrary, he would make no assumptions other than a few fundamental ones necessary as a working basis. Even these he would subject to recurrent criticism to test their validity.

Thus by a process of accumulating facts, correlating them, reasoning with them, and continuous reexamination of his work, he will finally be in a position to offer a reasonably safe conclusion. The necessity for the establishment of an impartial scientific point of view and the constant insistence that students adhere to this point of view is, in my opinion, probably the most important, while at the same time one of the most difficult tasks, confronting the educator who undertakes to give instruction in the social sciences as they affect public utilities.

PURPOSE OF UTILITY EDUCATION

The method of instruction, the content of courses, and the emphasis to be ascribed to certain subjects will be conditioned by the immediate purpose of the educational program. The night school, the technical school, the extension school, the small college, and the large university all profess to be striving to advance hu-

man enlightenment; but they do so by different methods and with different immediate purposes in view. Without undertaking to analyze the purposes of all these educational institutions, I shall point out what I consider to be the four major purposes of public utility education in the social sciences as they apply to large universities.

TRAINING FOR CITIZENSHIP

The first and perhaps the most important purpose of such a program of education is to train young men for intelligent citizenship. Whatever may be their later occupations, the students of today must be the citizens of tomorrow. In a democracy it is essential that every man be competent to pass reasonable judgment on the practical issues of economic policy over which his prerogatives of citizenship give him jurisdiction. This principle of democracy is particularly applicable to public utilities. Their intimate relationship with human welfare makes them institutions of few rights and many duties. In a broad sense these rights and duties are subject to the interpretation placed upon them by the general citizenry. If these citizens are to possess the knowledge and clarity of vision to exercise their franchise privileges in the best interests of society as a whole, then it is indispensable that they should be cognizant of the economic relationships underlying the public utility industries. If the present instruction in the universities does nothing more than impart a clear knowledge of the economics of utility operations and a broad vision of the functions of public utilities in modern life, then it will have been eminently worth while.

The second purpose is derived from the first; namely, to train some of the most promising young men for the profession of teachers of the social sciences. The universities, standing as they do at the head of our educational structures, are the natural source of a continuous stream of prospective teachers who pass from the shadow of the universities to take up

their chosen work in all parts of the country. It is in this way that the knowledge of public utilities and their problems imparted at the universities is disseminated throughout the whole country. When we consider that the great body of the citizenry lies beyond the sphere of university influence, that in the hands of these citizens rests the ultimate future of our utilities, and that one of the important sources of knowledge on utility problems is the teacher, then we can appreciate the importance of the work done at the universities in training prospective teachers in the fundamentals of the utility industries.

A third purpose of public utility education in the social sciences is to train men for careers in the public utility industries. Within the last few years an increasingly large number of college men have been moving into the public service industries. Inasmuch as most of these young men are unfamiliar with the utility business, the utility companies had to spend a great deal of time and money in training them for the work. Part of this training dealt with the fundamentals of the industries, part with the routine procedure of the various departments of the business.

On this latter class of instruction I fail to see how the universities can be of much assistance to the utility companies. The routine of any business can be learned only from practical experience. On the first point, however, it is possible for the schools to be of considerable assistance to the utilities. By proper training in the universities it is possible to acquaint young men with the basic principles of the business so that the utilities may be relieved of part of the training in fundamentals which they formerly felt obliged to give. Thus the work of instruction might be so divided that the universities would take care of the training in fundamentals and the utilities themselves handle the training in departmental routine.

The fourth purpose of the educational

program in the economics of public utilities is to train men to be competent investigators in special problems that from time to time confront the utilities. The number of men adapted for such work is normally small. Advanced research in the complex economic problems of the utility industries requires a native talent, an analytical mind, and a perseverance not found in the majority of students.

When, however, such men do appear, it is incumbent upon the educational world to give them the best possible training to the end that their natural powers for research work may be developed. Such a function belongs to the graduate school, the membership of which is normally composed of men whose earlier scholastic achievements have demonstrated that they possess the requisite qualifications. This branch of our work, although not generally appreciated and still too recent to have produced any noticeable effect, holds out great possibilities for a rational solution of many of the problems confronting the public utilities today.

SCOPE AND NATURE OF UTILITY COURSES IN THE SOCIAL SCIENCES

In presenting the scope of modern curricula in public utilities as conducted in colleges of commerce I shall describe briefly the organization of the work at the University of Illinois. I do this for two reasons: First, by reason of active participation I am familiar with the work at this institution; second, the organization of the work at the University of Illinois may be taken as representative of what the larger institutions are attempting to do.

The work falls into two major divisions, undergraduate and graduate. In the former group the work is conducted through the medium of text books, lectures, discussion groups, and in some instances practical problems of a comparatively simple nature. The courses are general in their nature and designed to

(Continued on page 381)



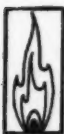
"Then" and "Now" in the Service Department of the Kansas City Gas Co. The picture of the man on the bicycle, taken from an old photograph, shows the service man of yesterday. The "Now" picture demonstrates the change that has taken place



The House in Red Flannels—This picture, taken one week after a snowfall, shows the difference between insulated and uninsulated houses. The insulated house, in the foreground, has retained the heat so well that the snow has not melted from the roof. In the uninsulated houses in the background the heat has leaked through the roofs and melted the snow



Two scenes of the Home Complete Exposition held recently at Indianapolis, Ind., showing the booth of the Citizens Gas Co. L. M. Edwards, commercial manager of the company, reports that more than 100,000 people attended



Editorial



In Union There Is Progress

THE gas industry of the United States and Canada will become fully united with the completion of the impending amalgamation of the Natural Gas Association of America with the American Gas Association. We will have a unit, welded to battle more efficiently with the complex problems that the march of progress presents.

The activities of these associations can be correlated to mutual advantage, because the aims and purposes of the manufactured and natural gas industries are parallel. Work of the American Gas Association, along commercial, technical, accounting, educational, industrial, research, and all other lines, can be extended easily to include natural gas conditions to the benefit of the natural gas companies. The converse applies to the important projects the Natural Gas Association has under way. Already it has been demonstrated that the natural gas industry can and does benefit from the Testing Laboratory, and their welcome contribution to its support was received soon after its establishment.

The action taken at Cincinnati by the Natural Gas Association, and its indicated favorable reception by the Executive Board of the A. G. A. on June 3 at Atlantic City, prompt us to make this an unofficial welcome to the Natural gas people. To President-elect N. C. McGowan, of Shreveport, La., to vice-president elect, F. W. Meals, of Pittsburgh, Pa., and to the newly elected directors, we extend our heartiest congratulations. It is to be hoped that these gentlemen may become, respectively, chairman, vice-chairman, and members of the managing

committee of a Natural Gas Department of the American Gas Association.

It is inevitable that a united gas industry will be able to do more and go further than can any one group, no matter how powerful. With the splendid records for achievement behind each of the gas associations, future success for the industry is assured.

In this union, there is progress.

Education

IT has been especially gratifying to note the increased interest taken by colleges and universities in courses that deal with problems pertinent to our industry, either directly or indirectly. A recent statement by Dr. Frank Goodnow, President of The Johns Hopkins University, is of significance, as it indicates continuance of the Gas Engineering Course which is proving so successful.

The daily press has contained considerable comment on the proposed new plan for advanced instruction at Johns Hopkins, arousing interest as to the status of the School of Engineering. Dr. Goodnow's statement, quoted below, will put to rest all rumors that have been circulated:

"Much interest has been displayed in the New Plan for University work at The Johns Hopkins University. This plan applies particularly to the Philosophical Faculty for the present, the School of Engineering will continue as formerly to offer its regular four-year undergraduate courses and graduate instruction. Only such changes in curricula will be made as are necessary to conform with the modified courses in the College of Arts and Sciences."

Appliance Inspection Improves Service

Low Cost and Remarkable Results Mark Year and Half of Special Work by Westchester Lighting Company

By E. P. PREZZANO

Vice-President, Westchester Lighting Co., Yonkers, N. Y.

INTRODUCING themselves as follows, representatives of the Westchester Lighting Company interviewed more than 33,000 of the company's customers in the course of one year: "Good morning, Mrs. Robinson. I am from Westchester Lighting Company and I have called to see whether all of your gas and electric appliances are in good working order. If you will let me look them over, I shall be glad to make any adjustments or minor repairs which will insure your getting perfect service. Here is my identification card."

They went through all parts of Westchester County, visiting homes, inspecting all types of appliances, making small minor repairs, reporting needs for larger repairs, and incidentally making a very complete survey of appliances in use.

These appliance inspectors, as the representatives are called, have accomplished much for both the customers and the company. They have built up company good will by giving a free service, unsolicited. They have facilitated future sales work, for, as a result of their survey, they have been able to furnish the sales department with information showing a detailed distribution of appliances in the district. They have made satisfied customers. And through their inspection of gas tubing as well as gas connections they have done invaluable work in preventing the serious happenings which result from leaks and the use of improper tubing.

The tabulated results of the inspection and survey show most clearly what has been accomplished through this work. However, before giving these as conclusive proof of the value of the new service, it is interesting to note why the

inspection was started and how it is made.

Before the Westchester Lighting Company undertook this inspection of appliances, the usual calls came to the various district offices of the company requesting men to repair appliances in the homes. The repair men from the gas shops and the electric appliance repair men, going out to answer these calls, found in many cases that customers asked them to make small adjustments or repairs on appliances other than those which had originally caused the trouble. The reports of these minor repairs showed that a regular inspection of appliances would be most beneficial. Under the direction of the sales promotion department, the appliance inspection division was organized. It was started in a small way two years ago with only two men making inspections. It has grown rapidly, however, and there are now 15 men who carry on the work throughout all of the districts of the company. They go out directly from the various district offices and their movements are directly controlled by the district supervisors of the special service division.

Of some importance is the record which shows that when the appliance inspectors first went out, the work of the gas and electric appliance repair men increased. This was natural since the inspectors found appliances which needed special attention and which had not been reported to the company. However, when the inspectors made the second round in the same district, the report shows a decrease in calls sent in for major repairs.

When an inspector is ready to start out, he is given a number of cards similar to that shown.

NAME		DATE	
ADDRESS		TYPE OF DWELLING	
LED.	FOLIO	REPORT	REPORT
GAS		ELECTRIC	
Range		Iron	
Auto. Wtr. Mtr.		Washer	
Cic.		Trainer	
Heater		Cleaner	
Laundry Stone		Ref. Igniter	
Hot Plate		Percolator	
Coffee Cover		Toaster	
Tubing		Boiling Mach.	
* Check Appliances on Premises			

The card that the inspector takes with him

As may be seen, on each card is a list of the gas and electric appliances most generally found in the home. Space is provided for any others which may be used by a customer. Opposite each listed appliance is space to be checked if the appliance is on the premises as well as room for a report showing the condition of each one. Before being given to the inspectors, the cards are sent to the addressograph department where the names and addresses of customers are imprinted in the space shown. The cards are then given to the men by groups, each group representing the customers on one ledger. It has been found that it takes two men approximately one month to cover one ledger or approximately 700 accounts. The name of the district, the date of the interview with the customer and the type of dwelling visited are also filled in by the inspector. On the reverse side of the card is space for the inspector to show (1) appliances found and examined; (2) motors oiled; (3) repair orders issued with number and date.

After customers have been interviewed and the appliances inspected the cards are filed alphabetically in the respective district offices for future use.

If, when the inspector calls, he finds no one at home, he leaves a card which is purposely printed in two distinctive colors so that it will surely attract attention. On the card in space provided he writes the date, the name and address of the customer and the time he called. The

regular printed matter on the card explains that he had called while the customer was out, that he was unable to gain admittance and that he will call again. The employee signs his name over the signature of the company, and leaves the card where it may best be seen by the customer when he or she returns.

As an inspector completes an inspection, he leaves with the customer a stamped return postal card which permits the customer to state whether he has been pleased by the service rendered and whether or not he wishes further service of a similar character. He may also offer suggestions or criticism regarding the inspection. The return of these cards alone has shown that customers have been highly pleased by the inspections and that the new work is well worth while.

There are, however, the cold and unbiased figures of the reports to prove definitely and finally the value of appliance inspection. In visiting 33,316 customers, the representatives inspected a total of 122,734 appliances both gas and electric. Of these, they found 98,132 or practically 80 per cent in efficient working order, and 17,674 appliances or approximately 14 per cent were repaired or adjusted by the inspectors on their visits. These figures as well as those which follow are based upon a twelve-month period.

It is interesting to note that the tools of each inspector consisted of a pair of pliers, a wrench, a screw driver, and a can of oil. They made practically all re-

U.S. Patent 1,222,222

Our inspector called for the purpose of examining and adjusting your appliances.

Please give below your opinion of this new service.

Name _____

Address _____

Date _____

The card the inspector leaves if no one is home

pairs using only this simple kit, for in only 368 cases, or about half of one per cent of the articles inspected, was it necessary to order repair parts. Appliances beyond repair numbered 298. These cases were referred to the sales department to be followed up at a later date. The remaining appliances which make up the last five per cent were all gas appliances and while they were in good working order, they did not have the necessary connecting flues. In these cases the omission was reported and letters were sent out by the company informing the customer that a flue would add greatly to the safety of his household and offering to install one at a nominal cost. The matter was so important, in fact, that if no answer to the first letter was received a subsequent registered letter was sent to the customer with a return card enclosed to check its delivery.

While the inspection work was begun with the purpose of making minor repairs and adjustments as explained above, it has had a far more reaching effect and has been the means of making a most complete and valuable survey of conditions throughout the county.

The inspection of flues, for example, has led to the installation of these in many establishments. The inspection of gas tubing has been most beneficial in promoting safety work. In homes where gas tubing was found to be old and worn out, the inspector pointed out the danger of using tubing and offered to supply new and approved tubing at a nominal cost.

The inspection shows the exact distribution of appliances on the district and since the information is available to sales department it can be well used by it in future canvassing. Naturally, the record of the appliance distribution is not perfectly accurate for any lasting time, for a customer may procure an appliance the day after an inspector calls. However, a salesman covering the territory at some later time at least may be sure of what customers *have* particular appliances.

With all of the valuable information it affords and the beneficial results it brings about, the inspection is not over-costly. The cost to the company, per appliance inspection, has averaged slightly more than nine cents. The inspection does not cost the customer anything.

As has been said, the inspectors turn their cards in at their respective district offices. Here the reports are tabulated weekly and sent to the sales promotion department in the company's general office where they are recapitulated monthly in accurate and detailed report form. The manner of keeping these reports in the sales promotion department is shown by the following headings under which the recapitulation is made:

- Number of customers visited.
- Total No. of appliances inspected to date.
- Found O.K.
- Beyond repair, referred to sales department.
- New appliances sold as replacements, number.
- Amount.
- Miscellaneous repairs made.
- Leaks repaired (gas).
- No flue (gas).
- No. of flues installed to date (gas).
- Repaired burner cocks (gas).
- Improper connections corrected.
- Repair parts ordered.
- Motors oiled (elec.).

The appliances are listed in a left hand column so that all figures are available in total and by special groups at a glance.

As the inspections continue and sections are covered a second time, comparisons showing increased use of appliances by the same customers, more widespread use of appliances, and the wearing qualities of the various articles are made. Already several sections have been covered twice and the reports turned in have closely paralleled those of the first inspection. The comparison shows that within the year and a half which intervened between the two visits, the great majority of appliances have been giving excellent service and that only a small percentage of them have need of slight adjustment.

(Continued on page 378)

Moving a Live Gas Main

By DAVID L. MEYER

Engineering Assistant, The Harrisburg Gas Co., Harrisburg, Pa.

TO make way for a new concrete and stone arch bridge from Harrisburg to an island midway between Harrisburg and the Cumberland County shore, over the Susquehanna River, it was necessary to move the old girder bridge, consisting of 16 girder spans, 16 feet down stream, onto a temporary trestle. It is to remain there until one-half of the new bridge has been built, when these spans will be removed to the west side of the island, making a double bridge between the island and the Cumberland County shore.

The bridge carries a 4-inch high pressure steel gas main supplying ten boroughs and villages, and as the bridge was shifted to its new position without interrupting vehicle traffic, it was necessary to provide some kind of flexible connection at each end of the main so as to follow the progress of the work.

This was done by hooking up the main at either end with a 25-foot length of fire hose, provided with suitable connections. Right angle bends were attached at the ends when the main was cut and

(Continued on page 350)

Possible Omission of Certain Sizes of Special Castings

By WALTON FORSTALL

Chairman, Committee on Cast Iron Pipe Standards

AT the Distribution Conference held at Baltimore, Md., April 4 and 5, the committee on Cast Iron Pipe Standards reached the conclusions given below as to the possible omission of certain sizes of special castings now shown in the 1925 edition of "Bell and Spigot Pipe and Special Castings."

The Committee is prepared to recommend to the Managing Committee of the Technical Section the changes to which they have no objection, unless as a result

of this publication, new objections are received prior to September 1, 1927.

These decisions were based entirely on the Committee's belief that the experience of 16 years had shown little, if any, use of the specials now marked for omission. These conclusions were sent to the gas companies in New York, Brooklyn, Chicago, Philadelphia, Detroit, Baltimore, and Boston. All these companies agreed to the conclusions with the exceptions noted at the end of the tabulation.

Plate No.	Reason
11. Omit.....	Congested conditions, where large pipe is usually needed, make advisable the smaller radius of Plate 10.
12. Omit sizes 16" to 30".....	Congested conditions, where large pipe is usually needed, make advisable the shorter radius of Plate 14.
13. Omit.....	Experience proves that dimensions of Plate 12 meet general needs better.
15. Extend sizes down to include 4".....	To provide castings for line deflections of any angle.
16. Omit sizes 16" to 30".....	Congested conditions, where large pipe is usually needed, make advisable using sizes on Plate 18.
17. Omit.....	Experience proves that dimensions of Plate 16 meet general needs better.
19. This plate should be omitted if investigation proves that cutting castings on Plate 15 will serve as well.	
26. The small top plug is very objectionable from the foundry standpoint, and investigation should be made as to whether it is needed by the gas industry.	
32. Question whether length should not be altered to enable the use of patterns for water specials.	
The exceptions to the above conclusions are as follows:	
Plate No.	Remarks
11.....	Boston does not wish to omit.
12 and 16.....	Detroit and Boston do not wish to omit sizes 16" to 30".
19.....	Boston does not wish to omit.
32.....	Boston does not wish to change length.

Gas Keeps Pullman Cars Warm

By R. D. HAYS

Industrial Gas Engineer, Illinois Power and Light Corp.

HHEATING Pullman cars is rather novel work for gas to do, but it is being done every day in Danville, Ill. Several months ago the Wabash Railway Company asked our heating engineers to help solve the problem of heating a Pullman car that arrives in Danville every evening about 9 P. M. on the C. & E. I. R. R. and is switched to the Wabash to be taken to Detroit, leaving Danville 11:10 P. M. During this time the car stands on the tracks at the Wabash station. As there was no provision for heating other than having a locomotive coupled to the car, the railway company sought for a better and less expensive method of keeping their passengers comfortable.

After a careful investigation of a Pullman's heating system all of its peculiarities were laid bare. We found that the gas system might have any one of several types of cars to heat, either standard, compartment, combination, tourist, parlor or dining car. There was also a possibility of having a private car to heat at times. This presented another variable in our problem. There are steel, wooden and steel plated cars, each presenting a different heating problem. As we could not get a Pullman to experiment with and determine from observation what was needed, all the available data were gathered and an estimate of the required equipment evolved. This was submitted and accepted.

The heating plant, which is located in the basement of the railway station, consists of a gas boiler fully equipped with automatic controls. All that is required of the attendant is to open and close a valve in the gas supply line.

The function of the gas boiler is to generate and deliver steam at fourteen pounds pressure. The steam is con-



The boiler that heats Pullman cars

ducted through an insulated line under the station platform and tracks to a steam stub located near the track where the Pullman coach stands during lay-over.

Although the system was designed to heat only one car, it has proved to be of sufficient capacity to heat as many as three cars. At times this additional capacity is needed for extra Pullmans and for private cars.

Sales News is New

Commercial Publication

THE *Sales News*, a four-page publication, recently made its bow to the members of the Commercial Section of the American Gas Association. The first issue contained a great deal of interestingly prepared and attractively presented material for the commercial man.

The *Sales News* is published under the auspices of the Commercial Section, of which J. J. Burns, St. Louis, Mo., is chairman, and J. W. West, Jr., secretary.

No regular publication date has been set.

THEY MUST DO IT WITH GAS

EVERY time a Chicagoan in the loop breathes, he inhales one-tenth more dust and carbon dioxide and three times as many bacteria as he did a year ago, according to air test charts completed by the health department.

Despite the headway made in eliminating smoke, air in the downtown area is steadily becoming more polluted with other substances, the tests showed. In outlying districts it remains about the same. J. J. Aberley, head of the ventilation division, made the report to Health Commissioner Bundesen.

Samples used in the tests were taken in three zones of the city: (1) the loop zone; (2) the middle zone, located three miles out, and (3) the outer zone, seven miles out.

In the loop zone, the number of dust particles per cubic foot jumped from 7,800 in 1926 to 8,600 in 1927 while the bacteria count increased by a ratio of 14 to 46. Carbon dioxide increased from 4.22 to 4.5 parts per 10,000 and carbon monoxide—poisonous fumes from burned gasoline—from .08 to .14.—From a Chicago, Ill., newspaper.

Moving a Gas Main

(Continued from page 348)

connected to the hose with couplings. The hose was connected to the vertical leg of these bends and allowed to hang below the bridge. Trouble was experienced at the west end due to the hose kinking, but this was overcome by suspending the loop of the hose in a wooden cradle. After the ends had moved about five feet apart the cradle was unnecessary. As the moving progressed the couplings were loosened and the vertical legs turned toward each other to avoid sharp bends at the connecting points between the vertical legs and the hose.

The bridge span was moved by means of hydraulic jacks working on each pier between the girders and bracing on the new piers. Steel plates were first put under the girders and heavy grease applied to aid in sliding to new position.

The job was completed in six days without mishap and the gas connections worked very satisfactorily. After the bridge was landed in its new position the main was connected again with steel pipe.

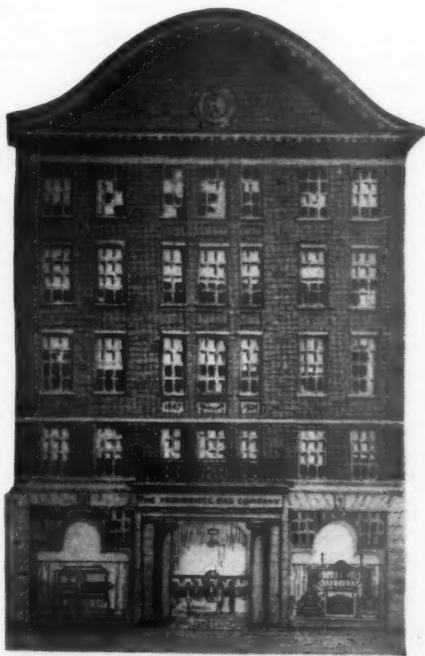
Speakers Bureau Under

H. H. Smith, is Active

A TOTAL of 43 talks on the Industrial uses of gas have been given recently and 52 are booked for presentation in the near future, according to H. H. Smith of the Boston Consolidated Gas Company, Boston, Mass., chairman of the Speakers' Bureau of the Industrial Gas Section of the American Gas Association.

Talks have been given in the following cities: Worcester, Mass.; Haverhill, Mass.; Springfield, Mass.; Fall River, Mass.; Lowell, Mass., and Boston, Mass. Twelve talks have been delivered in Woonsocket and Pawtucket, R. I., and two have been given in Hartford, Conn. Three have been given in New York, and eight in Cincinnati, Ohio.

The 52 that are booked for advance presentation are all in representative cities.



Reproduction of four-page folder distributed by the Providence Gas Co. to organizations visiting the plant at night. The societies, etc., meet at the gas works, are given dinner, and are then conducted through the plant. The folders contain pertinent information about the company, and on the second page a special message for the organization being taken through is given.



"Copyrighted, Clifton Church"

Program for M. I. T. Industrial Course

THE sixth annual industrial gas course, sponsored by the Industrial Gas Educational Committee of the New England Gas Association with the cooperation of the American Gas Association, will be held at the Massachusetts Institute of Technology, Cambridge, Mass., June 13 to 24.

The purpose of this course, conducted through the assistance of Professor Gordon B. Wilkes, is to present to the engineers of the industry a rapid review of the basic principles which should determine the selection of appliances. Specific problems regarding the application of gas to industry will be presented to the students for solution. They will also be required to present the data gathered in an acceptable report. Pertinent notes and data will be distributed before each lecture, and all lectures will be illustrated with lantern slides or demonstrations.

A varied assortment of equipment in the gas laboratory will be at the students' disposal for tests, etc.

The work of the course will be handled under the same discipline and system of rating as ordinarily obtained in the curriculum of the Massachusetts Institute of Technology. A certificate will be awarded giving the composite grade received for the entire course.

It is suggested that a free reading of the American Gas Association publication *Combustion* should be made prior to the opening of the course.

In order to accommodate a limited number of men who wish to attend one or two lectures, it has been arranged to permit attendance at a maximum of three lectures for the fee of \$10.00. Such attendance will not include liberty of active discussion. The number of men attending the course in this manner must, of course, be limited and it is requested that arrangements be made with

the secretary on the opening day of the course for such attendance.

Arrangements may be made through the secretary for rooms in the Craft Dormitory at the Institute. This is one of the most beautiful spots on the Charles River Parkway. The charge will be \$20.00 per man for two weeks. It is felt that a great deal of benefit can be derived from the association and exchange of ideas of the men who stay at the Institute Dormitory, particularly since it is intended that a great deal of work outside of classes will be required of the men attending.

Reservations should be made through Robert L. Gifford, secretary, 231 Main Street, Pawtucket, R. I., immediately.

John J. Quinn, Quincy, Mass., is chairman of the Industrial Gas Educational Committee of the New England Gas Association. The following are members of the committee: H. Vittinghoff, R. J. Phelon, Prof. G. B. Wilkes, and J. J. Winn, Jr.

The program of the course is as follows:

Monday, June 13

Welcome, J. J. Quinn.

Report Writing, Prof. Winnard Prescott.

Combustion—Heat and Its Measurement, Prof. G. B. Wilkes.

Tuesday, June 14

Corrections for Temperature and Pressure.

The Chemistry of Combustion, by Prof. G. B. Wilkes.

Wednesday, June 15

Calorimetry, Prof. G. B. Wilkes.

Heat Treatment, Prof. R. S. Williams.

Thursday, June 16

Thermal Capacity and Flame Temperature, Prof. G. B. Wilkes.

Analysis of Furnace Gases.

Recuperation and Regeneration, by Prof. G. B. Wilkes.

(Continued on page 364)

IN THE LETTER BOX

The Brooklyn Union Gas Company

Brooklyn, N. Y.

TO THE EDITOR:

I am very much pleased with the last number of the MONTHLY. I wish every member of the Association could be prevailed upon to read the articles in regard to the Laboratory. I think what has been published will convince everyone who reads it, not only of the necessity for a Laboratory, but of the really remarkable work being done.

C. E. PAIGE,
Vice-president.

Chem. and Met. Calls

Attention to Research

THE following appeared on the editorial page of the February, 1927, issue of *Chemical and Metallurgical Engineering*, under the title, "Making Gas a Better Industrial Servant":

"Gas is often called the 'ideal' industrial fuel, and on the score of controllability, cleanliness, efficiency in use, and over-all convenience it often deserves that designation.

"However, the use of gas by the chemical engineering industries has been much restricted for two reasons. First, the lack of modern and efficient appliances designed especially for gaseous fuel. Second, the greater cost of gas when available only from public utility companies at the customary retail rates.

"The American Gas Association has recognized the first of these difficulties as a problem of national importance. It is attacking the problem seriously and is now preparing to spend a research and development fund of \$100,000 per year for a five-year period. This will be welcome news to the industries that recognize the merit of gas and would like to use it as their plant fuel.

"In the past industrial users have been deterred by lack of suitable furnaces and appliances. And appliance manufacturers have been deterred from spending the large sums needed for developing industrial equipment by an apparent lack of prospective customers. The A. G. A. industrial gas research project will break up this unfortunate cycle and will afford the needed information and stimulus for new appliance design. The Association is to be congratulated upon this step forward in cooperation with its industrial customer groups.

"It now is the duty of the prospective gas users in the chemical engineering industries to do their part by accurately defining their needs. One arrangement to this end has al-

ready been made with the American Baking Institute, which has been commissioned by the American Gas Association to find out just what would constitute the ideal conditions for the baking of bread. The gas man well says, 'If you will tell us exactly how you would like to bake the loaf we will produce an appliance to do that job accurately and economically.' A similar cooperation with those interested in heat treating of iron and steel is being arranged.

"Like cooperation should be developed between the gas association and associations in every line of chemical engineering production. There is no chemical engineering industry that does not have its process heating problems. A careful study of the fundamentals of heating in each of these industries may reveal a community of interest between the gas producers and that industry as a gas user. These can well be served by this large research project.

"In many instances the first steps toward cooperation can be taken by an individual company that realizes its peculiar needs in process heating. A company can take up the matter with the city gas company of its own locality and through it, if necessary, with the American Gas Association specialists. In many instances it will be found that appliances suited to the task are already available, having been developed elsewhere by other gas companies or by some gas appliance builder. Where a suitable appliance cannot be had at once steps will be taken toward the development of the needed information and the design of appropriate appliances. It, therefore, remains the fault of the user industry itself, if it fails to gain the latest and the best in gas-burning equipment."

10,000 Learn of Gas

WHAT is considered the largest home service school ever held in Brooklyn, N. Y., was given at the Academy of Music on May 2, 3, and 4, and on the evening of May 4. The demonstrations were given by the *Brooklyn Eagle* with the assistance of The Brooklyn Union Gas Company. Other utilities and merchants cooperated.

The Academy of Music, which seats 2200, was crowded from pit to dome at each one of the sessions. It is estimated that 10,000 people attended the four sessions.

The demonstrations were given by Miss Jessie DeBoth assisted by Miss Ruth Soule, Martha Louise Grant, Mildred Magonigle and others of the home service department of The Brooklyn Union Gas Company.

On the final evening, Harris M. Crist, managing editor of the *Eagle*, and the Hon. James Dunne, Supreme Court Justice of Kings County, demonstrated the making of a "Baked Alaska" on two gas ranges which were installed on the stage.

TIDE OF MEN AND AFFAIRS



© Blank & Stoller
P. H. Gadsden

PHILIP H. GADSDEN, vice-president of The United Gas Improvement Company, Philadelphia, Pa., was re-elected to the Board of Directors of the Chamber of Commerce of the United States at the annual meeting of the Chamber held at Washington, D. C., May 2 to 5. M. S. Sloan, president of the Brooklyn Edison Company, Brooklyn, N. Y., was also elected a director.

Mr. Gadsden, a well-known figure in the gas industry, has served as a director of the organization for the past four years. His reelection is recognition of his service to the Chamber of Commerce, and to the time and effort he has expended in this work.

Mr. Gadsden is also president of the Philadelphia, Pa., Chamber of Commerce, and is a director of the Pennsylvania State Chamber. He is now and has been a member of a number of important committees of the U. S. Chamber of Commerce.

"The entire utility industry should be gratified at the reelection of Mr. Gadsden and the election of Mr. Sloan," said Alexander B. Macbeth, president of the American Gas Association, in commenting on the results of the Washington meeting. "Mr. Gadsden has been the able representative of our industry for the past four years, and his new honor is as well bestowed as it is well received by the gas industry."

HENRY C. SHIELDS was recently elected President of the Troy Gas Company, Troy, N. Y. Since 1911 he has been vice-president and general manager of the company. He has been connected with the company and its predecessors since 1871.

C. F. SHEPARD, of the Central Hudson Gas and Electric Corp., Poughkeepsie, N. Y., has been placed in charge of the architects and builders service bureau that has been started by the company.

CHARLES L. CADLE, formerly assistant general manager of the Rochester Gas & Electric Corporation, Rochester, N. Y., has been appointed general manager of that utility. Mr.

Cadle first came to Rochester from Cleveland to become electrical engineer for the New York State Railways, in 1917 being made chief engineer of that company. He was appointed superintendent of public works of New York State in 1921, but he returned to Rochester in 1923 as consulting engineer for the Rochester Gas & Electric and in 1924 assumed the duties of assistant general manager.

Mr. Cadle was born in Mentor, Ohio, and was graduated from the Case School of Applied Science in Cleveland in 1904. He entered upon his career with the Cleveland Railway Company and two years later was appointed general manager of the Electric Railway Improvement Company, the position he resigned to remove to Rochester.

Joseph P. Haftenkamp, formerly superintendent of the gas department of the Rochester Gas & Electric Corporation, will succeed Mr. Cadle as assistant general manager. Mr. Haftenkamp has been very active in A. G. A. work, having served as chairman of the Technical Section in 1925-26. He has also been a member of several important committees.



Howard Sheckells

HOWARD SHECKELLS, gas main and service department, Consolidated Gas Electric Light & Power Company of Baltimore, Md., has been given the "Citizen's" award, offered annually through the *Baltimore Sun*.

This award is made by an anonymous donor styled "Citizen" through the newspaper. The *Sun* prints a photograph of the man selected by the company for the award, together with an account of the meritorious action.

What Mr. Sheckells did is best told in the following extract of a letter received by the company from Sol Bleakman, of Baltimore, in connection with an automobile accident last September, when Mr. Bleakman's car, occupied by Mr. and Mrs. Bleakman and their three children, was overturned. Mr. Sheckells, in the course of his regular duty with the company, happened to pass that way.

Mr. Bleakman's letter says:

"At the time of the accident it was raining very heavily. My family was rendered unconscious by the shock and had it not been for a man, an employee of yours, I am sure that we should have lain there for hours.

"My daughter was hurt very seriously and it seemed as though she must be taken to the

hospital or at least to a doctor's office. This man, who works at the Arlington branch of the gas company, was passing by and saw the wreck of our car. He stopped, helped us to get out of the debris and rode around in the heavy rain trying to get a doctor for my daughter. I learned that this man's name was Sheckells. On being unable to find a doctor he administered 'first aid' to us and had it not been for this I am sure we would have fared worse than we did."

D. F. BURRITT, engineer in charge of gas properties of the Middle West Utilities Company, has been elected vice-president of the company. Other officers were re-elected, excepting C. C. Herrmann, who resigned as assistant treasurer following his election as treasurer of the Central and South West Utilities company.

Before becoming affiliated with the Middle West Utilities Company in 1920, Mr. Burritt had spent a number of years in gas plant construction and operation in New England. For eight years he was gas engineer for the National Gas, Electric Light and Power Company, Detroit, which operated gas properties in the central and eastern states. For three years Mr. Burritt was general manager of the Utilities Operating Company, Kalamazoo, Mich.



J. P. Van Hook

J. P. VAN HOOK, formerly New York manager for the Beckwith Company, has been appointed representative of the Home Incinerator Company, Milwaukee, Wis. He will be located in eastern territory, including New Jersey, metropolitan New York, Philadelphia, and Washington. Mr. Van Hook has had 15 years' experience selling

gas and electric appliances, both in the East and on the Pacific Coast.

ANTHONY SUNDERLAND, merchandise manager of the new business department of the Danbury and Bethel Gas & Electric Co., was recently elected mayor of Danbury, Conn. In 1912 Mr. Sunderland was a member of the common council of Danbury, and in 1913 was elected mayor. Subsequently he was elected for two following terms, being the only mayor to serve three consecutive terms. His recent reelection makes his fourth term.

He has been in the employ of the utility company for 25 years.



E. F. Schmidt

EDWARD F. SCHMIDT of the new business department of The Toledo Edison Company at Toledo, Ohio, has been appointed new business manager of that company succeeding the late Albert K. Young.

Mr. Schmidt's first connection with the Toledo Company dates back to 1915, when he was employed by the

Toledo Beach Company, a subsidiary of The Toledo Edison Company. During the first part of 1916 Mr. Schmidt became associated in the new business department of The Toledo Company in the capacity of a territory representative and continued in this department until March, 1919, when he was transferred as new business manager of the Hattiesburg Traction Company at Hattiesburg, Miss. In 1920 Mr. Schmidt again became connected with the new business department of The Toledo Company and in 1923 was appointed Division Manager of the domestic electric appliance division of The Toledo Company and in 1925 was appointed assistant new business manager of The Toledo Company.

A. H. WIMBERLY has been made acting superintendent of the gas distribution department of the Georgia Railway & Power Company, Atlanta, Ga., succeeding the late C. J. Weinmeister. E. C. Kollock has been made assistant to Mr. Wimberly.

Mr. Wimberly was an intimate associate of Mr. Weinmeister for more than 20 years. Prior to his appointment as assistant superintendent, Mr. Wimberly was foreman of the gas shops. He first began work with the company on October 29, 1894, and since that time has advanced steadily.

Mr. Kollock first began work with the gas distribution department. After nearly a year in that department he took the place of assistant to the superintendent of the service department and held that post until his recent appointment. He was with the South Carolina Power Company, at Charleston, previous to his connection with the company in Atlanta. He is a graduate of Georgia School of Technology in the class of 1908.

RICHARD B. MELLON, president of the Mellon National Bank of Pittsburgh, was elected a member of the board of directors of The United Gas Improvement Company recently. He was chosen by the board to fill a vacancy

caused by the resignation of Morris W. Stroud, president of The American Gas Company.

Upon approval by the stockholders at the annual meeting held on May 2 of an amendment to the by-laws, providing for the election of an additional director, Samuel T. Bodine was elected a member of the Board, Arthur W. Thompson having become ex officio a director when he succeeded Mr. Bodine as President.

Mr. Stroud, as president of The American Gas Company, has moved his office to the U. G. I. building, Broad and Arch streets, where he will be in daily touch with the affairs of the company and The United Gas Improvement Company.

"We are very much pleased to announce the election of Richard B. Mellon as a member of the board of directors of The United Gas Improvement Company," said Mr. Bodine. "Mr. Mellon will bring to the company the benefit of the ripe judgment, wide experience and valued counsel of one of America's leaders in finance and industry."



G. B. Buck

GAYLORD B. BUCK has been promoted as general new business manager of the Public Service Company of Colorado, succeeding C. A. Semrad, who has been promoted to general manager of the St. Joseph Railway, Light, Heat & Power Company at St. Joseph.

Mr. Buck has been associated with the Public Service Company of Colorado since July, 1924, as new business manager of the electric department.

Mr. Buck's service with Henry L. Doherty & Company dates back to 1910 when he entered the employ of the Citizens Gas & Electric Company at Mt. Vernon, Illinois, as meter reader and later being made assistant cashier of that company. In 1912 Mr. Buck was transferred to the new business department of the Mt. Vernon Company in the capacity of territory representative and in 1914 was appointed new business manager of that company.

From 1915 to 1917 he was new business manager of the City Light & Water Company of Amarillo, Texas.

In the latter part of 1917, Mr. Buck was transferred as new business manager of the Durham Company at Durham, North Carolina, remaining with the Durham Company

until 1924, when he was transferred to the new business department of the Public Service Company of Colorado.



C. M. Benedict



H. R. Sterrett

C. M. BENEDICT, President of the Des Moines Gas Company, Des Moines, Iowa, has been granted a leave of absence and will become assistant to P. H. Gadsden, vice-president of The United Gas Improvement Company, Philadelphia, Pa. His duties will deal with public relations work.

H. R. Sterrett, manager of the Des Moines company, has been made vice-president and manager, and will have full charge of operations.

Mr. Benedict was vice-president of the Charleston (S. C.) Consolidated Railway and Lighting Company twelve years during which time Mr. Gadsden was president of that company. Mr. Benedict came to Des Moines from Charleston. He has been with the United Gas Improvement Company in various capacities for thirty-two years.

Mr. Sterrett came to Des Moines ten years ago as engineer. He was named manager in January, 1924, and has served in that capacity up to the present in addition to being elected to the board of directors. He has been with the United Gas Improvement Company seventeen years, and went to Des Moines from Ardmore, Pa., a suburb of Philadelphia.

The complete list of officers of the company is: C. M. Benedict, president; H. R. Sterrett, vice-president and manager; G. W. Curran, secretary; J. G. Gamble, assistant secretary; I. E. Mowen, treasurer, and I. W. Morris, assistant-treasurer.

RICHARD SHEPARD, assistant general superintendent of mains, Consolidated Gas Company of New York, N. Y., rounded out 46 years in the gas industry on May 13.

Mr. Shepard was born in New York City and entered the employ of the Metropolitan Gas Light Company's pipe shop on May 13, 1881. Two years later he became a messenger for the Municipal Gas Light Company and

was made a junior clerk at the works within a short time. In August, 1885, he was transferred to the street department as a clerk; in 1886 he was assigned to the 99th Street works and later to the 63rd Street and 1st Avenue yard in the same capacity. In 1900, upon consolidation of the street department districts, he was promoted to general clerk and transferred to the 111th Street and 1st Avenue yard. On July 29, 1902, he became stock clerk of the street department and in August, 1907, was made superintendent of pavements. On January 21, 1918, he was advanced to his present position of assistant general superintendent of the department of mains and services.

GEORGE H. WARING, consulting engineer of Grand Rapids, Mich., is to be president and chairman of the board of directors of a \$1,200,000 corporation which is to build a modern gas plant in Rosario, Argentina, a city of 400,000 population.

Mr. Waring went to Argentina a year ago, when he put in an application with the Rosario municipality for a franchise to build a plant to manufacture and distribute gas. This franchise being granted, he went back to South America last November. On his second trip he purchased a tract of land upon which to erect the plant and purchased the old gas mains of a company which had ceased operating in 1916. He then went to Europe, where he arranged for the financing of the company. He is now making plans and specifications for construction of a water gas plant at Rosario.

An Argentine company is to be formed, of which he is to be the head, as well as acting as its consulting engineer. E. P. Davis, manager of the Holland, Mich., Gas Company, has been made manager of the Rosario Corporation and will sail May 7 to take charge of the property. Mr. Waring expects to visit Argentina annually during the next few years to exercise general supervision of the establishment. The Rosario Company will be capitalized at \$1,200,000, with no bonds. All its stock has been subscribed. The company's franchise specifies that the gas plant shall be completed in two years, and it is expected that operations will begin in 1929.

Mr. Waring has been president of the Michigan Gas Association and has been vice-president of the American Public Utilities Company. In 1924 he was engaged by a group of international capitalists to make an inspection of and complete report on the Primitiva Gas Company of Buenos Aires. During his recent visit to Europe he went to Germany and Holland, to look into new processes for complete gasification of coal, and he is now preparing a final report on these processes.

GLENN C. CARNAHAN, manager of the house

and water heating division of The Peoples Gas Light & Coke Company, Chicago, Ill., has resigned to accept a position with the James B. Clow & Sons Company, Chicago, Ill., as general sales manager of the gas appliance department.

Mr. Carnahan is a graduate of Armour Institute. His first employment after graduation was in 1914 for R. B. Harper as an assistant chemist at the laboratory of the Peoples Company.

In 1916 he became a water heater salesman and continued this connection with that end of the business until the day of his resignation from the company. He has been serving as the manager of house and water heating division since 1921.

When he took over the division of house and water heating the central heating plants in operation in Chicago numbered only a few; today there are over 1600 central heating plants in operation in Chicago.

Six former sales executives of Henry L. Doherty and Company have organized under the firm name of P. H. Whiting and Company, Inc., and will do a general investment securities business, handling customer ownership campaigns for public utility and industrial concerns. Offices have been opened at 1 Wall Street, with a branch office in the Academy Building, in Newark. Mr. Whiting was general retail sales manager of Henry L. Doherty and Company and is an authority on customer ownership. Associated with him are R. C. Harvey, A. B. Collins, C. H. Gleason, and C. D. Bechman.

The GAS REFRIGERATOR IS HERE!

At last a refrigerator has been perfected that preserves all foods in an even constant cold without disturbance to any mechanical means of operation—no machinery whatever to get out of order!

It is the HENRY SERVICE Gas Refrigerator, recommended and guaranteed by The Laclede Gas

Light Company. Years of continuous scientific experiments have made possible the development of our refrigeration which business engineers recognize as the coming method of food preservation. There is no other refrigerator made that is so simple of construction and operation and at the same time so complete.

It is absolutely and adaptively, The Gas Refrigerator provides absolute protection of health, looks—constant dry cold—expensive, difficult, broken and failed delivery, and supplies for the whole use. It is an amazing power, making to get out of order. It is automatic, automatic, automatic.

Mail the Coupon [] 18 Months to Pay
The LACLEDE Gas Light Company - Office at Evansville - Central 3800



St. Louis learns of gas refrigeration

Affiliated Association Activities

New England Gas Association



M. B. Webber

ABOUT 100 members attended the fourth meeting of the Operating Division of the New England Gas Association held at the Mohican Hotel, New London, Conn., May 6 and 7, 1927. The meeting opened with a dinner after which Chairman A. H. Scott introduced Viggo E. Bird, vice-president and general manager of the Connecticut Power Co., New London. Mr. Bird spoke briefly, saying he was glad to have the New England gas men visit New London, and in turn introduced Mayor William C. Fox who welcomed the members to the city. A paper was read by Neil G. Medberry, Stone & Webster, Inc., describing the work of leveling the 1,000,000 cu.ft. holder at New London. This was followed by a discussion of several items in the question box. On the morning of May 7, John J. Dowling, supt. of power, Connecticut Power Company, read a paper describing the New London gas plant and the remaining items in the question box were taken up.

The Connecticut Power Company acted as host at a luncheon, inspection of its gas plant, and a visit to the submarine base. This was the first meeting ever held by the New England Gas Association in Connecticut and the number of gas men who turned out was very gratifying. Mr. Bird was the chairman of the committee of arrangements.

At the annual meeting of the Gas Sales Division of the New England Gas Association held in Boston on May 13, 1927, M. B. Webber, assistant treasurer of the Athol Gas & Electric Company, was reelected the governor and J. H. Sumner, the secretary-treasurer. The board of managers consists of: A. W. Sampson, R. B. Wright, J. H. Sumner, J. L. Johnson, and Howard B. Hall.

Michigan Gas Association

THE annual meeting of the Michigan Gas Association will be held on July 5, 6, and 7, 1927, at the Grand Hotel, Mackinac Island, Mich. It will again be held jointly with the meeting of the Michigan Electric Light Association and one day will be devoted to a joint program. Because of the fact that this

year the committee was able to obtain dates which follow immediately after the 4th of July holiday, a great many are going to take advantage of this and bring their wives and families. All of the resort activities on Mackinac Island will be in full swing; all of the railroad and steamship summer schedules will be in force. The hotel has extended the special convention rates from July 1 to 8. The business program will be up to the usual high standard and made up of topics of general as well as local interest.

A cordial invitation is extended to the men and women of the gas industry in the nearby territory to attend this convention and see, as Secretary A. G. Schroeder says, "Michigan at its best."

Mid-West Gas Association

AT the twenty-second annual convention of the Mid-West Gas Association held in St. Paul, Minn., April 20, 21, and 22, 1927, the following officers were elected: President, C. A. Nash, United Light & Railways Co., Davenport, Iowa; first vice-president, H. R. Sterrett, Des Moines Gas Co., Des Moines, Iowa; second vice-president, Louis Stein, Northern States Power Co., Minneapolis, Minn.; and secretary-treasurer, A. W. Schmidt, Des Moines Gas Co., Des Moines, Iowa.

Canadian Gas Association

THE following papers will be presented at the annual convention of this Association to be held in Toronto, June 16 and 17, 1927: "Naphthalene Removal," by A. R. Powell, M. Merritt, and J. F. Bryne of The Koppers Company and the Western Gas Construction Company; "Distribution in New Residential Sections," by Joseph Lucena of the Syracuse Lighting Company; "The Drying and Further Purification of Town Gas," by representative of the West Gas Improvement Company; "Waste Heat Recovery in Gas Works," by representative of West Gas Improvement Company; "House Heating with Manufactured Gas in Canada," by R. J. Percival of the Consumers' Gas Company; "Low Temperature Carbonization by the McEwen-Runge and the K. S. G. Systems," by Ralph L. Brown of the International Combustion Engineering Corporation; "Advantages and Disadvantages of the Dry Quenching of Coke," by A. M. Beebe of the Rochester Gas & Electric Corporation; and "Lead Bath System of Tar Distillation," by representative of the Woodall-Duckham Company, Ltd.

There will be two business sessions during

the convention held in the morning of both days; on June 16th at the Royal Canadian Yacht Club followed by a luncheon there; on June 17 at the auditorium of the Consumers Gas Company. The Royal Canadian Yacht Club is one of the finest and best known yacht clubs in the world and is located on an island overlooking the harbor and city. The annual dinner of the Association will be held on the evening of the 16th at the King Edward Hotel where the headquarters for the convention will be located. There will be a trip of inspection to the plant of the Consumers Gas Company on the afternoon of the 16th, and to the industrial and sales departments of the same company on the afternoon of the 17th.

Empire State Gas & Electric Association

THE Commercial Section of the Empire State Gas & Electric Association will meet at Elmira on June 21 and 22, 1927. The business session will be held in the morning and evening of the first day and the morning of the second day. E. L. Wilder of Rochester, chairman of the section, will be in charge of the meeting.

There will be an address of welcome by F. H. Hill, vice-president of the Elmira Water, Light & R. R. Company. T. F. Kennedy, new business manager of the Doherty Organization, will address the meeting on "Merchandising Methods."

The program of the meeting is not complete as yet, but there will be committee reports from the following: merchandising, industrial electric sales, industrial gas sales, electric and gas home service, and rural service.

The headquarters of the meeting will be at Roricks Glen, a park owned and operated by the local gas and electric company.

The entertainment program will consist of sight seeing trips to Watkins Glen, Corning Glass Works and large industrial plants. Golf privileges will be extended to the delegates at the Elmira Country Club.

On Tuesday a buffet luncheon will be served at the Glen by the local company and on Tuesday evening a beefsteak dinner will be served.

The annual meeting of the Accounting Section was held at the Hotel Niagara, Niagara Falls, May 5 and 6, 1927. There were about sixty accounting officers of member companies present.

After calling the meeting to order Thursday morning, the chairman, Ernest Johnston, introduced the Honorable A. Monroe Grier, K. C., president of the Canadian Niagara Falls Power Company. Mr. Grier stated that W. Paxton Little, vice-president of the Niagara Falls Power Company who was scheduled

to deliver the address of welcome was unable to be present on account of the recent death of Mrs. Little. He then read the address which Mr. Little had planned to deliver, following with extemporaneous remarks expressing his pleasure at being present and welcoming the delegates on behalf of the Niagara companies.

The delegates expressed their thanks to Mr. Grier and on vote of the meeting, the chairman appointed a special committee consisting of Messrs. Murphy, Holmes and McMillan to draft an appropriate resolution of sympathy to Mr. Little.

In the absence of Mr. Davidson, the chairman, Mr. Cleveland read the report of the Committee on Revision of Form of State Tax Report which called attention to the changes which had been made and are now in effect and which expressed appreciation for the co-operation of the State Tax Department and the Public Service Commission in connection with this matter.

J. I. Blanchfield, chairman, presented the report of the Committee on Fixed Capital Records.

H. L. Davis, director of technical employment and training, New York Telephone Company, discussed informally the subject of personnel selection and training.

Following luncheon, W. K. Bradbury, of the Niagara Falls Power Company, briefly told the story of Niagara and the delegates were then taken to the outdoor model of Niagara Falls and through the Hydraulic Plant of the Niagara Falls Power Company.

The Friday morning session opened with an address by H. M. Brundage, president of the association. Mr. Brundage complimented the section on the meeting and the program. He referred to some of the Association activities urging particularly the cooperation of those present in connection with the more general distribution of the Association's monthly bulletin and the weekly bulletin of the New York State Committee on Public Utility Information. He also referred to the organizations for public speaking and emphasized the point that this organization would be ineffective without the assistance of the local companies in securing dates for speakers. He extended to the Section the greetings and best wishes of the Executive Committee.

The chairman next called upon F. W. Herbert of the National Electric Light Association and H. W. Hartman of the American Gas Association who extended the greetings and interest of their associations.

L. W. Buchanan, auditor of the Tonawanda Power Company, read an interesting paper on New Developments in Commercial Accounting Practice. Following this paper, C. R.

Vanneman, chief engineer of the Public Service Commission, informally discussed some of the causes of complaints reaching the Public Service Commission and traceable to methods of personnel of accounting departments.

The final paper on the program was by W. C. Archbold, manager of Credits and Collections, The Syracuse Lighting Company, Inc., entitled "Making Collections Painless."

The Nominating Committee, consisting of Messrs. Keller and Blanchfield, presented the nominations of H. C. Davidson, secretary, Consolidated Gas Company for chairman and H. B. Cleveland, treasurer, Elmira Water, Light & Railroad Company, vice-chairman for the ensuing year. Mr. Davidson and Mr. Cleveland were duly elected.

Southwestern Public Service Association



M. T. Walker

FOLLOWING is the list of officers elected at the annual convention of the Southwestern Public Service Association held in New Orleans, La., April 26 to 29, 1927: President, M. T. Walker, Southwestern Gas & Electric Co., Shreveport, La.; first vice-president and chairman, Railway Section, A. B. Paterson, New Orleans Public

Service, Inc.; second vice-president and chairman, Gas Section, C. M. Thompson, Texas Power & Light Co., Waco, Texas; third vice-president and chairman, Electric Section, B. F. Cherry, Weatherford Water, Light & Ice Co.; treasurer, R. G. Soper, Dallas Gas Co.; secretary, E. N. Willis, Dallas, Texas.

The executive committee is composed of M. T. Walker, A. B. Paterson, C. M. Thompson, B. F. Cherry, Harold E. Borton, J. L. Alexander, E. S. Myers, J. C. Kennedy, W. B. Tuttle, P. K. Baker, D. S. Caldwell, H. C. Morris, A. F. Townsend and E. N. Willis, ex officio.

In a special message to the MONTHLY, President Walker comments on the utility outlook as follows:

"The general business outlook in the territory of the Southwestern Public Service Association has been more or less affected by the low cotton market and the decline in the price of crude oil; however, I do not believe the utilities have suffered any, in fact, nineteen twenty-seven will probably show the normal increase in sales of both gas and elec-

tricity. Oil well pumping and power for irrigation plants offer a splendid field for increasing power loads."

Missouri Association of Public Utilities



W. H. Henby

AT the annual convention of this Association held at Cape Girardeau, Missouri, May 5, 6, and 7, 1927, the following officers were elected: President, W. H. Henby, St. Louis County Water Co., St. Louis; 1st vice-president, O. W. Mattison, Missouri Power & Light Co., Mexico; 2nd vice-president, E. D. V. Dickey, Citizens Gas

Co., Hannibal; 3rd vice-president, A. E. Reynolds, Springfield Gas & Electric Co., Springfield; secretary-treasurer, F. D. Bearlee, St. Louis. The following comprise the executive committee: H. Spoehrer, D. A. Belden, F. S. Dewey, H. S. Kilby, and T. Moloney.

Speaking about the public utilities in Missouri, President Henby said, upon assuming office:

"Extension of public utility service to all parts of Missouri has given this state, with a population approximately that of the original thirteen Colonies, man-power 250-fold greater than the total man-power of the Colonies. The wealth of Missouri, to which railroads, telephone, electricity, gas and water supply utilities have made major contributions, is many hundreds of times greater than the wealth of the thirteen liberating and creating commonwealths. This may impart some idea of how powerful and wealthy the single state of Missouri has come to be.

"Good roads, automotive vehicles, railroads, electric railways, telephones, telegraph, gas, electricity and water supply service have reduced in 1927 the physical proportions of the Missouri of 1840 to those of an average county in the latter period. Because of the manner in which Missouri has been concentrated and enriched by good roads and other public utility services, the entire State has become from the point of view of the public utility service, practically a semi-metropolitan area.

"Our gas companies serve a population of almost 1,700,000 people, almost 50 per cent of the population of the state."

Southern Gas Association



P. S. Arkwright

THE following officers were elected by the Southern Gas Association at its 20th annual meeting held at Atlanta, Ga., April 19-21:

President, Preston S. Arkwright, President of the Georgia Power Company; first vice-president, Roy A. Ziegler, Jacksonville, Fla.; second vice-president, M. L. Kane, Atlanta,

Ga. J. P. Connolly, Charleston, S. C., was re-elected secretary-treasurer.

E. S. Dickey, Baltimore, Md.; J. J. Gannon, St. Augustine, Fla.; D. H. Levan, Savannah, Ga., and Sam Brown, Key West, Fla., were elected directors for one year. R. C. Hoffman, Baltimore, Md.; A. D. Whitaker, Atlanta, Ga.; C. M. Crawford, Augusta, Ga., and S. L. Duckert, Charlotte, N. C., were elected directors for two years.

"My knowledge of the gas business in the past 20 years has proven to me the necessity for this service in every community," says Mr. Arkwright, "and I see a great future in the industrial field as well as increased domestic demand."

Wisconsin Utilities Association

THIS association has the unique arrangement of not holding an annual convention of all the membership but promotes sectional conventions throughout the year. This plan has now been carried on for two years so successfully that it will be continued. Each section meeting of the past year has been very successful from the viewpoint of attendance and interest shown in the subject matter presented and discussed. It is felt that these meetings have yielded true results as the interest of those in attendance has been undivided.

The year's work of the Association is reviewed in its publication "Activities," under the heading "Second Annual Meetingless Convention" and with the admonition "Please come to order." The President, John St. John, then proceeds to give his annual message, which is followed by reports of the treasurer, secretary, accounting service bureau, the chairmen of the commercial, electric, gas, transportation, and public relations sections, and the chairmen of other committees.

The election of officers for the coming year, conducted by mail ballot, resulted as follows:

President, John St. John, of Madison; vice-president, John Anderson, of Milwaukee; treasurer, G. C. Neff, of Madison; chairman of Public Relations Section, C. R. Phenicie, of Green Bay; vice-chairman of Public Relations Section, William C. Lounsbury, of Superior.

At a recent meeting of the Executive Committee of the Wisconsin Utilities Association the following representatives were elected to serve for the year commencing October, 1927, on the A. G. A. Sectional Managing Committees: Accounting Section, F. R. Eckert; Commercial, L. M. Williams; Publicity and Advertising, L. M. Williams; Manufacturers, W. R. Lacey; Technical, George Wagner; and Industrial Gas, A. A. Schuetz.

The Accounting Section of the Wisconsin Utilities Association will hold its annual convention in Green Bay, Wisconsin, Friday and Saturday, June 17 and 18, 1927, with headquarters at the Hotel Northland. C. R. Phenicie, vice-president of the Association, will deliver the address of welcome and chairman F. R. Eckert will deliver his annual address. The papers to be presented are: "Review of Accounting Section Convention of the N. E. L. A.," by R. E. Moody; "A Proper Distribution of Costs on Automobiles, Trucks, and Transportation Equipment," by M. Zass; "The Accountant's Place in the Safety Program," by C. B. Boulet; "Employee's Education," by H. P. Taylor; "Accounting Problems in Connection with Industrial Gas and House Heating Customers," by Robert J. Johnson; "Apportioning Expenses Between Merchandising and Operation," by J. E. Gray; "Accounting Treatment of Property Retired," by Sam R. Hatch; and "The Valuation Situation," author to be announced later. There will also be an address by the Mayor of Green Bay, James H. McGillan, on "Public Relations Between the Public Utility and the Community," and an address by Harold L. Geisse of Wausau, Wisconsin.

The entertainment to be provided includes luncheons on Friday and Saturday, an automobile trip to Sturgeon Bay, and the annual dinner followed by dancing and entertainment at the Door County Country Club at Sturgeon Bay on Friday. The Wisconsin Public Service Corporation will hold open house on Saturday afternoon when opportunity will be afforded to those attending the convention to inspect its property. The committee making the arrangements for this convention consists of D. W. Faber, chairman, A. L. Buscher, H. P. Taylor, L. C. Christensen, L. P. Ziebell, L. P. Works, and G. S. Meyrick.

Oklahoma Utilities Association

CARL R. ERNSBERGER, President of this Association, comments as follows on the utility situation:

"The confidence displayed at present in the utilities is in great contrast to the skepticism held by the public in the past in Oklahoma.

"The spirit of appreciation now expressed for the honest efforts of the utilities in building a greater Oklahoma indicates that we will have splendid cooperation between the public and the utilities generally in Oklahoma.

"The natural gas industry is beginning to enjoy its fullest share of confidence of the public, along with the utilities in general in the state of Oklahoma, which is most gratifying to the public, as well as to the operators."

Pacific Coast Gas Association

THE Northwest Regional Conference of the Pacific Coast Gas Association was the occasion of a gathering of some ninety men in Spokane, Washington, on May 6 and 7. Washington, Oregon, Montana, Idaho, Utah and California were represented.

The principal topic discussed at the meeting was that of electric competition in the domestic cooking and water heating fields. This is becoming quite a problem with the smaller gas companies in the Pacific Northwest due to the fact that hydro-electric power is overdeveloped and results in electric rates which are difficult to compete with. The discussions, however, brought out that while electricity is a real competitor and can not be overlooked, it can be successfully met by intensive and persistent sales activity supplemented by first class gas service. The material on this subject presented at the conference was turned over to the Association's Committee on Electric Competition and will be presented as a part of that committee's report at the Annual Convention in September.

J. F. Pollard, vice-president and general manager of the Coast Valleys Gas & Electric Company of Salinas, read a very notable paper describing the method pursued in rehabilitating that company in the esteem of its customers and at the same time placing it on a profitable basis. It is the record of a management which had the courage to more than double its investment at a time when the company was losing money and prestige due to poor service.

Jas. J. Ferrari, superintendent of the Puget Sound Power & Light Company of Bellingham, Washington, in the course of his paper on industrial gas made a plea for more co-operative sales effort on the part of gas companies in the Pacific Northwest and sug-

gested the formation of a Northwest Gas Sales Association subsidiary to the Pacific Coast Gas Association.

The second day of the Conference was largely devoted to a discussion on recent legislation in Pacific Coast states and a discussion of the committee work of the Association. The action of the legislatures in Oregon, Washington and California has been especially gratifying to public utilities as it furnishes evidence of a growing understanding of public utility problems, and such unfair legislation as has been proposed has been decisively defeated.

One of the features of the meeting was a paper on "What the Consumer Expects from the Home Service Department of a Gas Company," by Miss Lutie V. Burkholder of the Tappan Stove Company. Miss Burkholder's remarks fitted in most excellently with the general tenor of the thought expressed at the Conference that the future of the domestic load of the gas industry rests entirely upon the satisfaction given to its consumers.

A dinner dance given on the evening of May 6 was attended and enjoyed by everyone.

The meeting closed with a standing vote of thanks to the Spokane Gas & Fuel Company and its manager, J. L. Stone, for their hospitality.

Prof. Ira H. Woolson Dies Suddenly at Chicago, Ill.

PROFESSOR Ira H. Woolson, consulting engineer, National Board of Fire Underwriters, died suddenly at Chicago on May 8.

Professor Woolson was an authority on matters relating to fire protection and in the preparation of rules, regulations and codes he always sought the advice of the gas industry on subjects pertaining to the gas industry before they were promulgated.

His death, which occurred while attending the convention of the National Fire Protection Association, is deeply deplored by the gas industry.



The Mich. Fuel and Light Co., South Haven, Mich., stresses the Blue Star program

Budd Medal for Saving Life Established

Award to Be Made to Employees of Companies With Which Britton I. Budd is Associated

AS a means of stimulating interest in safety work and first aid instruction, Britton I. Budd, president of the Public Service Company of Northern Illinois, has announced the establishment of the Britton I. Budd Medal for the Saving of Human Life.

This medal, designed by J. Juszko, eminent New York sculptor, and executed in silver, will be awarded to any employee of the Public Service Company of Northern Illinois, or of the several other companies with which Mr. Budd is associated, who succeeds in saving anyone's life.

A committee has been appointed to investigate evidence in all cases of life saving as above specified, and this committee's decision will be final in all cases. Awarding of the medal will be made retroactive, to include all cases since January 1, 1926.

"We are hopeful," said Mr. Budd, in concluding the announcement, "that the establishment of this award of honor will accentuate the need of constant watchfulness, thoughtfulness, and preparedness to prevent the waste of human life, as well as to reward those who, by prompt application of training and display of courage, succeed in saving a fellowman."

Recently awards and presentation of medals were made to Lewis W. Gibbs and Edward F. Muska, employees of the Public Service Company of Northern Illinois, and to Melville W. Cover, an employee of the Chicago Rapid Transit Company, and posthumously to Lyman A. Dean, a motor coach operator of the Chicago North Shore & Milwaukee Railroad, who succeeded in backing his motor coach out of the path of a fast passenger train far enough that the lives of eighteen school children were spared only by the sacrifice of his own. The other awards were for successful application of the Schaefer prone pressure method of resuscitation.



Make Tax Suggestions Now

THE Joint Congressional Committee on Internal Revenue Taxation was created under Section 1203 of the last revenue law to study the operation and effects of the federal system of internal revenue taxation (particularly income taxes), and to recommend improvements in the law and its administration.

The Committee will be glad to receive such written suggestions and criticisms as the various trade associations, chambers of commerce, and like bodies, or their individual members, may desire to submit to it.

Communications of a wholly general nature are practically without value. The task is to improve specific provisions in the law and specific administrative modes or practices. Where practicable, reference should be made to the title and sections of the act involved and drafts of proposed changes in the law should be submitted. To be given careful consideration and study, suggestions should be mailed to the Committee, Room 452, House Office Building, Washington, D. C., without undue delay.

ACCOUNTING SECTION

A. L. TOSSELL, Chairman

EDWARD PORTER, Vice-Chairman

H. W. HARTMAN, Secretary

Two Books for Utility Accountants

"Public Utility Finance" and "Accounting Procedures for Public Utilities" in Brief Review

TWO books of vital interest to accountants in the gas industry are "Public Utility Finance," by Walter E. Lagerquist, and "Accounting Procedures for Public Utilities," by Warren G. Bailey, and C. E. Knowles. Both of these books are published by the A. W. Shaw & Co., and the price is \$7.50 each.

PUBLIC UTILITY FINANCE

Public Utility Finance is the first of a series on "Materials for the Study of Public Utilities," being issued by the Institute for Research in Land Economics and Public Utilities. Richard T. Ely is editor-in-chief, and Herbert B. Dorau is managing editor. The book is an important addition to the literature of the utility industry. In the preparation of the material, the author has carefully reviewed magazines, technical publications, proceedings, etc., and has succeeded in welding together a wealth of valuable material. The basis of capitalization, working capital, regulation of utility issues are all dealt with in detail, as are also fixed capital charges, operating costs, and statistical tests used in the analysis of various utilities. There are valuable treatises on amortization, the method of dealing with reserves, surplus profits, taxation, and dividends, etc.

Since it was the idea of the author to deal with the utility industry as a whole, there is comparatively little about the different utilities. However, in considering the problems that are specifically those of the gas utility, ample detail is given.

Special treatment is given to the following subjects of interest to the gas business: Capitalization and fixed capital

requirements, investigation and analysis of a gas plant, operating costs and expenses, statistical tests used in measurement, etc.

Extracts from articles and speeches by the following men will give an idea of the quality of the material: Herbert A. Wagner, Ralph E. Heilman, Henry L. Doherty, Herbert B. Dorau, Samuel Insull, E. Paul Young, R. A. Carter, W. L. Ransom, L. R. Nash, etc.

ACCOUNTING PROCEDURES

Accounting Procedures for Public Utilities, like Public Utility Finance, is the first of a series to be published by the Institute for Research in Land Economics and Public Utilities. The accounting book is the first of a series planned on Public Utility Texts.

This book is certainly a tribute to the advances being made by public utility accountants. Various tasks are described, even to the inclusion of the details and policies that make for adequate control of finance, sales, and manufacture.

A high standard is reached in the book, many forms being given to make it a practical volume for accountants to have available. There is a happy mixture of theory and practice.

Blue Star Representative

A. E. HIGGINS of Boston, Massachusetts, has been employed to act as Field Representative in presenting the plan to local gas companies. Mr. Higgins will call upon any company interested in the plan and personally assist in the inauguration of the plan locally. His former sales experience in the automobile and in the insurance field augurs well in the promotion of the plan throughout the country.

Accounting Pamphlet of C. of C. is Now Available

AN interesting pamphlet, "The Evolution of Overhead Accounting," prepared by the Department of Manufacture of the Chamber of Commerce of the United States, can be had from E. N. McCullough, at the Chamber of Commerce offices at Washington, D. C.

It is a 30-page booklet. Part 1 deals with the "Basic principles in the treatment of manufacturing overhead," and part 2 deals with "Designing the overhead structure."

Program for M. I. T. Course

(Continued from page 351)

Friday, June 17

Fuel Comparisons and Factors Affecting the Utilization of Gaseous Fuels, by Prof. G. B. Wilkes.

Heat Treatment, Prof. R. S. Williams.

Saturday, June 18

Process Problem—a special problem lecture on the practical work of the industrial engineer, R. L. Gifford, Pawtucket Gas Co., Pawtucket, R. I.

Monday, June 20

Report Writing, Prof. Winnard Prescott.

Low Temperature Heat Application, M. B. Webber, Athol Gas & Elec. Co., Boston, Mass.

Tuesday, June 21

Heat Transfer, Prof. G. B. Wilkes.

Heat Transfer and Refractories, Prof. G. B. Wilkes.

Wednesday, June 22

Temperature Controls, A. Fryendall, The Peoples Gas Light and Coke Co., Chicago, Ill.

Furnace Design, Joseph Jares, The Brooklyn Union Gas Co., Brooklyn, N. Y.

Thursday, June 23

Combustion Systems, A. Fryendall.

Friday, June 24

Refrigeration, H. D. Valentine, Central Hudson Gas & Elec. Corp., Poughkeepsie, N. Y.

The annual meeting of the Industrial Division, New England Gas Association, will be held at 12:30 on Friday, June 24. J. P. Leinroth, Chairman, A. G. A. Industrial Gas Committee on Education of Personnel, will give the address.

Arc Welding Prize Contest Announced

THE American Society of Mechanical Engineers has announced that it has accepted the custody of \$17,500 given by the Lincoln Electric Company, of Cleveland, Ohio, to conduct a world-wide competition for the best three papers disclosing advancement in the art of arc welding. Three prizes will be awarded, of \$10,000, \$5000, and \$2500 each.

A committee of judges appointed by the Society will pass upon the relative merits of the papers presented. All inquiries for further information should be sent to the American Society of Mechanical Engineers, 29 West 39th St., New York, N. Y.

Gas Hotel

(Continued from page 330)

set-up for a large banquet can be placed on these trucks, held in the refrigerators until ready for service when the trucks are placed in position in the banquet service kitchen and the crisp and cold salad, direct from the refrigerators, served to the guests.

A service kitchen on the third floor provides for the numerous private dining rooms and small banquet halls.

So, when you come to the "A. G. A." convention, as a gas man you will take pride in the fact that this, the biggest and most modern hotel in the world, is "all-gas."

Visualize the Job

(Continued from page 332)

the job assists in the "training in" of the new employee.

Photographs alone cannot be used to impart full information about the job. It is generally recognized, however, that Americans are "eye-minded" and that mental pictures formed through observation are a valuable addition to the impression of the job formed by the department head's and interviewer's instructions.

Complete sets of photographs on each job for which men are frequently requisitioned are being accumulated, and the expense has been amply justified by the very gratifying results.

PUBLICITY AND ADVERTISING SECTION

HARLOW C. CLARK, Chairman

E. FRANK GARDINER, Vice-Chairman

CHARLES W. PERSON, Secretary

Good Will Needs Fundamental Groundwork

Advertising and Service Play an Important Part in Creating
Favorable Public Opinion for the Gas Company

By F. H. HOLDEN

Department of Information, Southern California Gas Co., Los Angeles, Cal.

SUPPOSE that a hermit went out to the market place once a week, and gave a talk on how much he loved the world, and how anxious he was to be of service to other human beings, and then crawled back to his hole until another week passed by. No matter how eloquently he spoke, he could not expect the confidence and esteem of the general public. Fundamentally, "public relations" are based upon less tangible things than pure reason or the spoken word.

It would almost seem from this that advertising did not have a major part in building and in maintaining proper public relations. This is not the case. But it must be admitted that advertising is only an aid, and not the sole means of creating or maintaining a good public feeling. If advertising alone could do it, a man or corporation with "money to spend" could thereby become popular, respected, and trusted.

Suppose that a tire manufacturer were to build tires of such material that they would crumble to pieces after a few hundred or a thousand miles. Then, if he

were to use a great amount of space in newspapers and on billboards, and were to send circulars to automobile owners telling them where and how to buy his tires, he might sell a great many tires at the outset. A reaction would be almost immediate, however, for the more he advertised, the more would his customers be reminded of their worthless purchases. Even those who had not had experience with his tires would soon learn by word of mouth that it was better to buy another make. The more he advertised, the more firmly would this impression be implanted in the minds of the public, and the quicker would come his failure.

The reverse of this is, of course, equally true. If a gas company gives dependable service, and sends out men who know their business, and who, without talking about it, can impress upon their customers that they are competent and trustworthy, and if these same men are able to give satisfaction to a maximum number of customers, then the fundamental groundwork for good public relations will have been established. The



The average man or woman of a community is influenced less by expression than by impression

first and most necessary activity is actually to give the service, both through the gas service and through the numerous contacts between the company's employees and the public.

Then the way will be cleared for advertising that will be believed, once it is read. From the standpoint of psychology it is true that Mrs. Jones, who knows only one collector from the Southern California Gas Company, will always think about that collector when she reads a Southern California Gas Company advertisement. This is just another way of saying that advertisements of a public utility are always backed up by the personality of any person in that organization who may be known to the reader of the advertisement. With this qualification of the importance of advertising, let us go on to see what kind of advertising might be advantageous for a gas company. To a public utility, advertising presents problems which are not as impor-

tant as to other concerns, such as a department store, for example. To us is delegated the task of supplying a commodity which is classed as a public necessity, and which is regulated as such. One of our first and most fundamental tasks is to keep the public informed as to how we are doing this.

This cannot be done by merely the publication of facts and figures in regard to our business; these items are news and are published as news. Neither does advertising wholly consist in endeavoring to stimulate the sale of securities, appliances, or the use of gas for particular purposes. While our advertising is and will be directed along these three lines, our first emphasis must be upon the establishing of the company in the minds of the public as a well organized and competent utility.

The average man or woman of a community, we are safe to assume, is influenced less by expression than by impres-

Profit and Loss



The Southern California Gas Company demonstrates, sells and installs reliable gas appliances. Their chief object in doing this is to maintain dependable, satisfactory gas service by means of dependable, satisfactory equipment.

Through this both the public and the gas company profit.

*You are very welcome to visit the Company's
appliance display rooms.*

Southern California Gas Company

sion that there is real worth in an article or that there is both capacity and honesty in an individual or company.

Proctor and Gamble have used pictures which have brought out the whiteness of Ivory Soap, and have insisted, for years, upon two facts: that "it floats," and it is ninety-nine and forty-four hundredths per cent pure. With these ideas in the minds of the public there has been no question about sales of Ivory Soap. With this example before us, it might seem that our advertising should be directed along the lines of telling people that gas is the most economical fuel, that it is the most satisfactory fuel, that our ranges burn gas economically and do the best cooking. But these are only part of the larger picture which should be in the minds of our customers and the general public. We want the people to know that we have integrity, and that we have capacity for our job. For the twenty years that the Southern California Gas Company has been building its system, the service, as compared with the standard throughout the United States, has been high. We know that there have been shortcomings, and these have been magnified by certain individuals, but by and large the general opinion of the public is that we know our business and are carrying it on satisfactorily. It is this impression which we wish to emphasize and to fix more firmly in the minds of the people who either directly or indirectly come in contact with us.

As a company which is primarily delivering gas we would defeat our ends if we were to compete in our advertising with those who wish to sell, say, Fels Naphtha Soap or Onyx Hosiery. We should not aspire to sell gas ranges as Henry Ford sells Fords and Fordsons. When his sale is completed a complete, independent unit goes into the hands of the purchaser. With a gas company it is the dependable operation of the corporation, and the belief in the minds of the voting public that they are being fairly and well treated, which counts the most.



Safety of Principal, Assured Income

Series "A" 6% Preferred Stock of the Southern California Gas Company presents an investment which combines safety of principal in the highest degree with assurance of the quarterly income. Bankers and financial houses from Coast to Coast recommend it.

In large or small blocks it may be purchased for \$25 a share, for cash or on terms: \$3 down and \$2 a month for each share.

Write or 'phone for information

Southern California Gas Company

All employees should read the advertisements as they appear, and all should feel, as they serve the public, either through direct or indirect contact, that advertising merely reiterates and emphasizes the impressions which their work will produce for good or for evil in the minds of our customers and the public at large.

Cities Service Concerts

Are Well Received

HUNDREDS of letters have been received by the Cities Service Company, the National Broadcasting Company and Goldman's Band praising the series of concerts being given every Friday evening in Carnegie Hall by Goldman's Band and broadcast by Cities Service Company through the stations of the National Broadcasting Company.

Oregon Companies Now Giving Radio Concerts

THE Portland Gas and Coke Company, the Pacific Power and Light Company and the Northwestern Electric Company are now sponsoring a series of Sunday evening concerts that are broadcast over station KGW. The initial concert was given over the Oregon station on March 6.

Illinois Industrial Gas

Course Starts June 20th

THE Illinois Gas Association announces the second short course in Industrial Gas Engineering, to be held at the University of Illinois, beginning June 20th, 1927.

The Illinois Gas Association will present, this year, a most unique course in the marketing of gas in wholesale quantities.

A questionnaire was sent out by the Association to the principal gas companies in the Middle West, asking them, quite specifically, what they would like to have taught in a two weeks' course. Thirty-five of the larger companies immediately replied with suggestions and on the basis of these suggestions, a course has been outlined. The Committee feels that in giving gas companies the kind of work most needed, they are serving the industries to the fullest possible extent.

The course will be devoted, chiefly, to gas-fired house heating, and instead of featuring the engineering facts involved, the curriculum indicates that the salesmanship of house heating will predominate the course. Nevertheless, industrial, hotel and restaurant work will be given due consideration.

Among the faculty already engaged to instruct are the following nationally known authorities:

Professor W. Trinke, Professor of Mechanical Engineering, Carnegie University.

Professor E. E. Ferris, Professor of Salesmanship, New York University.

Professor F. A. Russell, Professor of Organization and Operation, University of Illinois.

Professor Vincent S. Day, Professor of Special Research, University of Illinois.

Kirke Taylor, President, National Association of Purchasing Agents.

Wm. A. Darrah, President, Continental Industrial Engineering Company.

Harold B. Johns, house heating engineer, The Peoples Gas Light & Coke Company.

In addition to the lectures, recitations and demonstrations to be held, two symposiums of extraordinary interest are scheduled. The first will be held by the manufacturers' representatives of the principal makers of gas-fired house heating equipment. The second will be devoted to general descriptions regarding various makes and types of insulating material.

The course will be two weeks in length and so arranged that those who have taken similar courses will be installed in advanced classes, while "beginners" will be afforded an opportunity to secure a good "grounding" in the art of marketing in wholesale quantities.

The tuition is \$20.00, and no reduction will be made to those desiring to take less than the full two weeks' course. Upon successful completion of the work the Illinois Gas Association will issue official certificates, as well as cash awards to the two students having the highest grades in the final examination.

For further information, address A. B. Greenleaf, Room 325, Peoples Gas Building, Chicago.

The course will be under the direction of the Illinois Gas Association Committee to Cooperate with Educational Institutions.

The personnel of this committee is as follows: E. K. Demlow, Illinois Power & Light Corporation; J. D. Preble, Public Service Company, of Northern Illinois; R. E. Chew, Union Gas and Electric Co.; E. E. Lungreen, Western United Gas & Electric Co.; A. B. Greenleaf, Chairman, The Peoples Gas Light & Coke Co.

Ask Me Another

"Ask Me Another" is an old game to the home service departments of gas companies. Last year more than seven and one-half million women received cooking advice from these departments and for the first quarter of this year the home service department of the Consolidated Gas Company of N. Y. answered more than 35,000 questions relative to the great American appetite.

Convention to Be at Chicago

(Continued from page 326)

that autumn day ranks among the great deeds of the cities of the world.

In three-quarters of a century Chicago has grown to a city of three million people and an area of more than two hundred square miles, an accomplishment which has no parallel in rapid and permanent growth. In contrast to this, Chicago in 1840 was a small and very crude town, its population then numbering 4,479.

Chicago today as a manufacturing, wholesale and distributing center is unequalled. There is hardly a modern industry which cannot be found somewhere in the Chicago industrial district. Twenty thousand factories representing more than eleven thousand industries now thrive in this district, taking advantage of Chicago's greatly diversified raw material resources, its stable labor market and its very adequate transportation facilities.

MANUFACTURERS SECTION

W. E. STEINWEDELL, Chairman

H. L. WHITELAW, Vice-Chairman

C. W. BERGHORN, Secretary

Seventy-five Per Cent of Exhibit Space Sold

Biggest and Best Exhibition Ever is Predicted—Manufacturers Urged to Arrange for Booths Immediately

ALL indications point to another record-breaking exhibition when the A. G. A. meets at Chicago for its ninth annual convention, October 10 to 14. Already more than 75 per cent of the space available has been contracted for, while at the same time last year the figure was slightly less than 70 per cent.

The prospectus of the exhibition, now in the hands of the manufacturer members of the Association, gives complete details as to the size, facilities, etc., of all booths. Manufacturers desiring space are urged to make their reservations early, because of the decrease in the amount of space available this year when compared with last year. No guarantee can be made to provide for tardy requests.

The following manufacturers have applied for space at the Ninth Annual Exhibition of the A. G. A.:

James B. Clow & Sons
The Sands Manufacturing Company
The Scientific Heater Company
The Surface Combustion Company
Combustion Utilities Corporation
American Gas Products Corporation
The Estate Stove Company
The Chapman Valve Manufacturing Company
Peerless Heater Company
Hays Manufacturing Company
Mine Safety Appliances Company
The Beckwith Company
Moore Brothers Company
Dun-Rite Clock Device Company
Minneapolis Heat Regulator Company
The Time-O-Stat Corporation
Sprague Meter Company
Bernitz Furnace Appliance Company
The Cleveland Gas Burner & Appliance Company
The Columbus Heating & Ventilating Company
Robins Conveying Belt Company

Tinnerman Stove & Range Company
Bryant Heater & Manufacturing Company
Lovekin Water Heater Company
The Alpha-Lux Company, Inc.
The Kompak Company
The Bartlett Hayward Company
The Youngstown Pressed Steel Company
Home Incinerator Company
Chambers Manufacturing Company
Wilder Metal Company
The Connersville Blower Company
Detroit-Michigan Stove Company—Garland Div.
Detroit-Michigan Stove Company—Jewel Div.
Armstrong Cork & Insulation Company
Barber-Greene Company
Akme Flue, Inc.
Chicago Bridge & Iron Works
The Permutit Company
American Cast Iron Pipe Company
National Refrigerating Company
Spencer Thermostat Company
The Hoffman Heater Company
The W. E. Lamneck Company
Mears-Kane-Ofeldt, Inc.
L. J. Mueller Furnace Company
Eclipse Fuel Engineering Company
McWane Cast Iron Pipe Company
Link-Belt Company
The Wilcolator Company
The U. G. I. Contracting Company
Magee Sales Company
E. J. Lavino and Company
Safety Gas Main Stopper Company
Mid-West Incinerator Corporation
Welsbach Company
Chicago Tubing & Braiding Company
Lawson Manufacturing Company
The Ohio Foundry & Manufacturing Company
Reynolds Gas Regulator Company
The A. P. Smith Manufacturing Company
Gas Refrigeration Corporation
B-Line Boiler Company
Electrolux Servel Corporation
Economy Governor Company
Mulcare Engineering Company
The Imperial Brass Manufacturing Company
Johnson Gas Appliance Company
Giant Manufacturing Company
The Globe Stove & Range Company

- Sweet & Doyle Foundry & Machine Company
 The Cleveland Co-Operative Stove Company
 The Honeywell Heating Specialties Company
 Cooper Oven Thermometer Company
 Victaulic Company of America
 Majestic Manufacturing Company
 Milwaukee Gas Specialty Company
 American Heater Corporation
 The Cutler-Hammer Manufacturing Company
 The P. H. & F. M. Roots Company
 The S. B. Sexton Stove & Manufacturing Corporation
 Robbins Publishing Company
 Geo. D. Roper Corporation
 The G. S. Blodgett Company
 The Linde Air Products Company
 Carbide and Carbon Chemicals Corporation
 West Gas Improvement Company of America
 American Range Corporation
 Pittsburg Water Heater Company
 Hoffman Specialty Company, Inc.
 J. B. Slattey & Bro., Inc.
 R. D. Wood & Company
 Chicago Vitreous Enamel Product Company
 The Foxboro Company, Inc.
 The Roberts Brass Manufacturing Company
 Elgin Stove & Oven Company
 Crown Stove Works
 American Gas Light Journal, Inc.
 Isbell-Porter Company
 Pittsburgh Equitable Meter Company
 Pittsburgh Division
 Equitable Division
 Davis Emergency Equipment Company, Inc.
 Mueller Company
 American Schaeffer & Budenberg Corporation
 The Lattimer Stevens Company
 The Gas Machinery Company
 Walker & Pratt Manufacturing Company
 Robertshaw Thermostat Company
 The Cleveland Heater Company
 Cribben & Sexton Company
 National Tube Company
 Connelly Iron Sponge & Governor Company
 Titeflex Metal Hose Company
 Ruud Manufacturing Company
 A-B Stove Company
 Johns-Manville, Inc.
 American Meter Company
 Helme & McIlhenny
 D. McDonald & Company
 John J. Griffin & Company
 Metric Metal Works
 Maryland Meter Works
 Wailes Dove-Hermiston Corporation
 Homestead Heater Company
 The Tappan Stove Company
 The J. H. Grayson Manufacturing Company
 Reznor Manufacturing Company
 American Stove Company
 Reliable Stove Company Div.
 Quick Meal Stove Company Div.
 Dangler Stove Company Div.
 Direct Action Stove Company Div.
 Geo. M. Clark & Company Div.
 New Process Stove Company Div.
 Electric Indicator Corporation
 Superior Meter Company
 The Cleveland Gas Meter Company
 Semet Solvay Engineering Corporation
 Humphrey Company, Div. Ruud Manufacturing Company
 The Koppers Company
 The Western Gas Construction Company
 The Standard Gas Equipment Corporation
 Acorn Division
 Oriole Division
 Triplex Division
 Vulcan Division
 The Chaplin-Fulton Manufacturing Company
 Abendroth Brothers
 The Stacey Manufacturing Company
 Eriez Stove & Manufacturing Company
 Lyon Metallic Manufacturing Company
 Dearborn Chemical Company
 Favorite Stove & Range Company
 The Peninsular Stove Company
 The Improved Equipment Company
 United States Cast Iron Pipe & Foundry Company
 Roberts & Mander Stove Company
 Glenwood Range Company
 The Parsons Company
 Riter Conley Company
 S. R. Dresser Manufacturing Company
 General Gas Light Company
 The Bristol Company
 Lambert Meter Company, Inc.
 Remington Typewriter Company, Inc.
 General Office Equipment Corporation
 Elliott-Fisher Division
 Sundstrand Division
 Burroughs Adding Machine Company
 Rand Kardex Service, Div. of Remington Rand, Inc.
 Kalamazoo Loose Leaf Binder Company
 The W. S. Tyler Company
 B. F. Sturtevant Company
 The Proudfit Loose Leaf Company
 Bailey Meter Company
 The Stacey Bros. Gas Construction Company
 National Lead Company
 Standard Calorimeter Company
 Barstow Stove Company
 A. G. A. Testing Laboratory
 Patrol Valve Company
 Electric Household Utilities Corporation
 Magno Products Corporation

INDUSTRIAL GAS SECTION

H. O. LOEBELL, Chairman

C. W. BERGHORN, Secretary

F. C. MACKEY, Vice-Chairman

Research Committee Plans Cooperation With Users of Gas

Will Help in Solving Heat Problems

A "PIONEER BATTALION" has been formed by the Industrial Gas Section of the American Gas Association to hack a pathway through the forest of Industrial Heat Problems. This work has been intrusted to the Research Committee of that section.

No longer is it necessary for a gas company to spend thousands of dollars of its own money, in fruitless efforts to devise equipment to suit the needs of its customers. One large company, for example, has expended \$5000 in trying to develop a brass melting furnace, an effort that was a failure for the reason that the appropriation was exhausted before successful results were accomplished. Other splendid efforts along this line have also gone for naught.

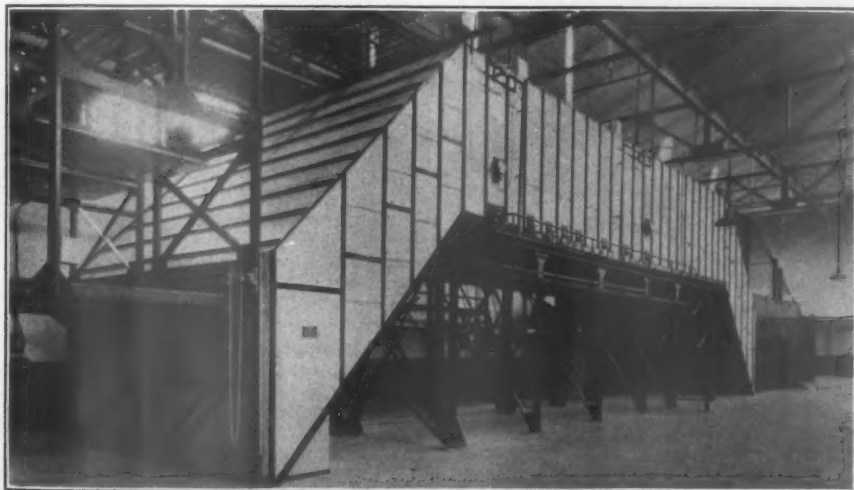
Industrial gas engineers now can turn their problems over to this Research Committee for solution. These problems will be allocated to the proper agency. If the problem is national in scope, it will go to the American Gas Association National Research Committee which is backed by a \$500,000 appropriation of

the American Gas Association. If the problem is in line with the specialization of any manufacturer, it will be directed there. Minor problems will be allocated in such a way that the burden will be minimized.

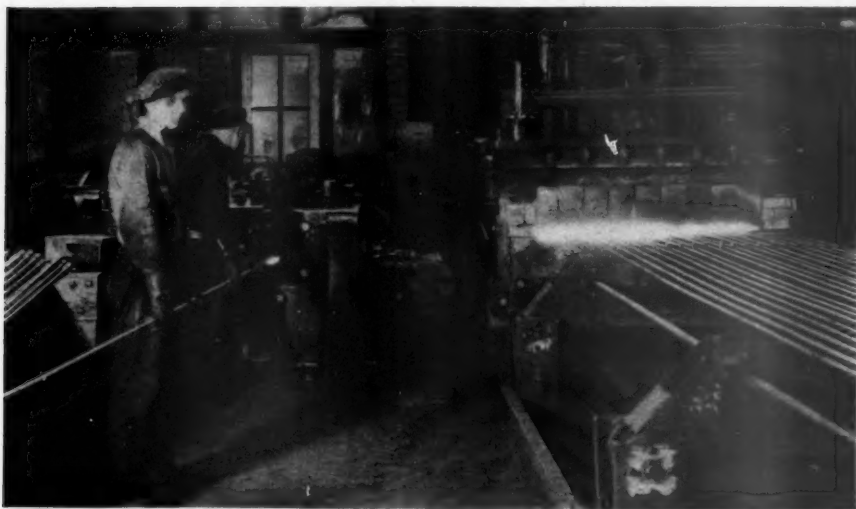
Several problems are already in process of research. A crucible brass melting furnace, mold dryer, and several other appliances have been suggested by Industrial gas engineers, and are being developed, and it is hoped, will be a great aid in the industry. More suggestions are in order.

In order that there may be no unnecessary duplication of effort, and that proper records of accomplishment may be kept, it is particularly desirable that industrial gas engineers send in information relative to new developments and gas applications in their own territory.

The value of the gas industry's research facilities and work is dependent upon the cooperation given by the industrial gas men in the industry. It is therefore urged that the suggestion of research problems as well as in-



A modern gas-fired japanning oven



Industrial gas in action

formation relative to new developments and applications, be sent in to Association Headquarters. All communications should be sent to W. D. Thompson, Chairman, Research Committee, Industrial Gas Section, American Gas Association, 420 Lexington Avenue, New York City.

REGARDING REPRINTS

ONCE AGAIN we wish to remind our contributors and readers that reprints of any material published in the American Gas Association MONTHLY may be obtained in accordance with the following scale:

100 copies, 1 page	\$2.00
Additional 100's	.40
100 copies, 2 pages	3.00
Additional 100's	.40
100 copies, 4 pages	7.00
Additional 100's	.75
100 copies, 8 pages	10.75
Additional 100's	1.05

These copies cover only actual printing costs. Reprints can be made according to this scale only if orders are received while material is still in type. Prompt action is, therefore, essential. Under any circumstances, permission of the author must be obtained before reprints can be made.

Competitive Fuel Data

Available for Members

THE American Gas Association is now preparing for the use of its members a series of confidential information sheets on the developments in the use of fuels now in competition with gas for industrial and factory heat operations.

A wealth of valuable information including comparative data, results of tests, etc., on all developments of a competitive nature will soon be on hand as a result of the work done by the committee on competitive fuels, of which R. H. Staniford, of The Brooklyn Union Gas Company, is chairman. This is a committee of the Industrial Gas Section of the A. G. A.

Committee is Studying

Industrial Sales Methods

THE sales methods committee of the Industrial Gas Section of the American Gas Association is collecting data regarding the industrial gas sales methods and policies pursued by various companies. The committee has already sent out 150 questionnaires and received 20 replies. Although it is somewhat early as yet to indicate marked trends, it has been shown that there is need for the formulation and establishment of definite and con-

sistent sales methods to be adopted by all companies.

Karl Emmerling, of the East Ohio Gas Company, Cleveland, Ohio, is chairman of this committee, and has asked the cooperation of all companies in this work.

Opportunity for Local Tie-up with Industrial Program

WITH the 1927 industrial gas advertising program well under way, the A. G. A. is continuing the tie-up campaign that proved so successful last year. Under this plan the local gas companies use modifications of the national copy and illustrations in the local newspapers over their own name.

The beneficial effect of this local tie-up advertising is quite apparent to members who have availed themselves of it in the past. It is expected that this service will be used by the entire membership shortly in the effort to surround American industry with sound, forceful gas propaganda that cannot help but have a highly favorable effect.

The advertisements cover a period of six months from March, 1927, and are available in 3- or 5-column widths. They may be ordered by letter. All companies are urged to match each local advertisement to the national one—use each newspaper advertisement during the month when the same advertisement appears in the national publications—that the tie-up may be complete.

Gas Lights Shine On Parisian Night Life

GAS is the sole illuminant in approximately nine-tenths of the streets of Paris, according to American gas men who recently conducted tours about the city. More than 4500 low-pressure gas burners are used in the so-called secondary streets, while 5500 high-pressure gas burners illuminate many of the principal streets.


In order to effect a systematic improvement in street lighting by gas, all the streets have been grouped according to their importance into five categories. To each of these there is a corresponding lighting system, based on the illumination needed.

The lamps are lit and extinguished automatically by clockwork.

One American gas man, after making a thorough inspection of the city by taxi, concluded that the gas lighting was highly efficient. He reports that Paris bears witness to the fact that streets lit by high-pressure gas are decidedly more brilliant than those lit by electricity.

HEATED BY GAS FUEL

The NEW HOME of the
Boston Consolidated Gas Company
100 ARLINGTON ST.
AT COLUMBUS AVE. & STURGEON ST.



An Invitation
ARCHITECTS, building owners, contractors, engineers, plumbers and others interested in the development and management of office buildings and industrial plants are cordially invited to inspect the new building—new—while it is being used to help do just the same, concrete and plaster in the floors, walls and partitions.

The installation is an outstanding example of the most modern type of heating equipment, and it will afford you a clear, convincing opportunity to familiarize yourself with the many advantages of a full flow system of supply, its efficiency as a fuel (gasoline), its economy in its installation and cost of operation—most to mention the saving it offers in labor and space through all Pipe Line supply and standard flow valves.

The installation, consisting of 16 boilers, with a total capacity of 1,150,000 Btu. per hour, is capable of maintaining the building at 70° F. at all times in the winter.

It is a marvel of efficiency and flexibility. Outdoor heat exchangers in the basement, the heat of fuel is transferred to the water in the boilers. Under normal conditions the building is heated by gas, and in the case of a shortage of gas, the heat of fuel is transferred to the water in the boilers. The gas fuel comes into the building by gas line, and its distribution to the various parts of the building is controlled by a system of valves and pipes. The heat of the gas is transferred to the water in the boilers, and the water is then used to heat the building.

Cost of admission to the building 10¢. Will be to inspect and to make of the system in the building of the new building or at the service office of the Gas Company, 100 Avenue Louis, Boston.

Boston Consolidated Gas Co.

Boston's new skyscraper, the home of the Boston Consolidated Gas Company, enjoys gas heat

Special Advertising for Foundrymen's Convention

THE American Gas Association has reserved two pages in the advertising section of the special American Foundrymen's Association convention issue of the *Foundry* magazine. The convention is to be held at Chicago, Ill., June 6 to 10.

The Peoples Gas Light & Coke Company, of Chicago, Ill., is reserving four pages in the same issue. The six pages, plus that of other interested local gas companies, who are being asked to cooperate, will insure an adequate presentation of the story the gas industry has to tell the foundry men of the country.

For Weary Advertising Men

THE tired copy writer must have solace. The following will cool his brow:

"She lit her candle and scuffled into her clothes, intent upon making that morning dash downstairs to light the fires in the kitchen and living room. Yes, damn Colonel Sykes for exploiting this patch of clay and sand in Sussex, and for persuading the new poor to put up cottages and bungalows. Cinder Town! She slithered down the steep and narrow stairs and into the kitchen, jarring a slim ankle against the coal-scuttle that was standing where it should not have stood. And that, too, was her fault! Resenting this, she jabbed at the thing with her foot, and by way of retort it tipped a rattling stream of coal upon the floor.

"Putting her candle on the kitchen table, and bending down to recover the lumps of coal, she signalized her submission to the tyranny of trifles by a sudden rush of tears. There was anger in her tears, and self-pity, and the rebellion of her youth against life's aimless and inevitable repetitions. But how foolish! and like a child she brushed the blurring wetness away with her fingers, forgetting the coal dust upon them. She put a match to the kitchen fire, wondering whether it was going to prove sulky, and while it was deciding that it would burn she collected the cans for the morning's hot water, and how she yearned for gas! To be able to slip down and turn a tap, and perhaps slip back to bed again."—From "Doomsday," a best seller of the present day.

THE IOWA PUBLIC SERVICE COMPANY, recently organized, has acquired the Central Iowa Power & Light Company and the Iowa Light, Heat & Power Company. The new company is directly under U. G. I. management.

The merged companies were under U. G. I. supervision and control, operating in the same and adjacent territories and their consolidation into one company makes a more compact and efficient organization, both from the standpoints of operation and financing.

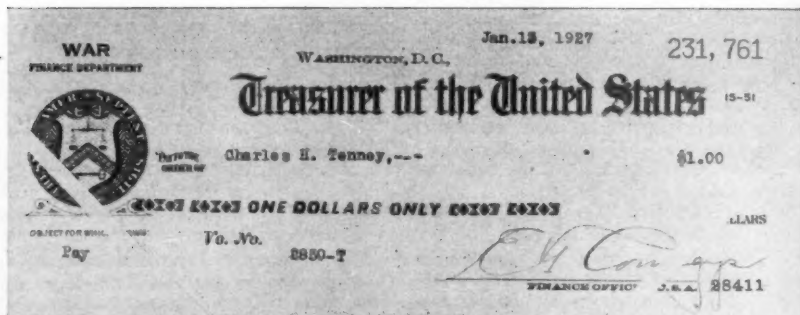
The Iowa Public Service Company serves 200 communities with electricity and four with gas in thirty-four counties of western and north central Iowa, its territory covering an area of approximately 17,000 square miles.

The officers of the Iowa Public Service Company are: D. M. Sterns, president; G. A. Neal, F. J. Rutledge, W. H. Taylor, vice-presidents; W. N. Porter, secretary; H. B. Maynard and Johns Hopkins, assistant secretaries; L. W. Wade, treasurer; E. MacMorris and J. B. Townsend, 3rd, assistant treasurers. The directors are: W. W. Bodine, G. W. Curran, P. H. Gadsden, J. T. Hutchings, F. J. Rutledge, D. M. Sterns and W. H. Taylor.

The local headquarters of the new company is Fort Dodge, Ia.

Urge Home Service Directors To Use Gas Refrigerators

AT a recent meeting of the committee on sales promotion, publicity and advertising, sub-committee of the refrigeration committee of the Commercial Section, it was the consensus of opinion that all gas companies should be urged to include a gas-fired refrigerator in the home service departments. The thought expressed was that by utilizing the refrigerator in the home service demonstrations, the way would be paved for future sales of refrigerators.



C. H. Tenney, well-known to the gas industry, is a dollar a year man, serving as chief of the Boston Ordnance District. The Monthly would like to know of other gas men who are dollar a year men

COMMERCIAL SECTION

J. J. BURNS, Chairman

G. M. KARSHNER, Vice-Chairman
J. W. WEST, Jr., Secretary

Cooperating with a \$2,000,000,000 Buyer

The Tremendous Buying Power of the Architects is a Stimulant
for Closer Contact Through Service

By **ROBERT B. MAHN**

Chairman, Architects' and Builders' Service Committee, A. G. A.

IT is pleasing to note that many gas companies are beginning to establish bureaus or departments adapted to meet the architect and engineer, through practical service work and as a basis for their present and future business in the field of new construction. That this class of professionals is of sufficient economic importance to warrant specialized service work is plainly shown by the advertisements in architectural and building trade magazines, an outstanding feature among these being co-operative service to architect and engineer. Among these may be noted: "Architects' Service Bureau," "Building Service Department," "Plan and Service Department," etc.

This is a sound economic business policy; otherwise service departments would not be offered to architect and engineer.

In the United States there are at least eighty-seven hundred practicing architects, not counting the building and contracting firms with architectural departments, the railroads, municipal work, industrial plants, etc.

The manufacturer and the building material and public utility service sections may be considered the focal unit of well-organized commercial departments for ultimate sales work. It is the unit most capable of gaining access to architect and engineer and presenting data that will secure the proper appliances and methods of installation. The practical solution of new construction problems, both for gas company and the architect,

lies in a policy of cooperative service work.

The United Press reported last December that treasury statistics showed ten million persons in the United States now hold membership in 12,403 building and loan associations throughout the country. This item alone indicates a tremendous domestic gas market, without reference to the regular channels of building construction. How large the average per capita gas consumption figures for these new homes will be depends upon the study and amount of coordinated effort the gas industry develops through national and local means.

The plea that all gas companies should cooperate with architects in their territory is not a new one. Consider however that the buying power of the building industry is concentrated in a few thousand architects. Consider also that in no other industry does so small a group of specialists control so much money, about two billion dollars a year.

Many people have an idea that the architect is not a business man. The architect not only creates and executes plans for building, but combines with this the duties of a purchasing agent—for someone's else goods.

Without hesitation, I number among the needs of gas, the utilities of the United States—architects' and builders' service, whether the utility serves a metropolitan district or supplies small communities, whether it is for the architect who is planning a large structure, or the small suburban home. If the structure requires

gas, there is need for architectural service. That service is just as essential in the town of ten thousand as the metropolis of six million. Every section of the United States has its own particular problems, but when they are sifted down they will show they are closely related with the problems of the whole.

If we agree that the establishment of architects' and builders' service departments, divisions or bureaus is necessary, that is the first step in a program of co-operation to reach the Building Industry. The second step is that the Architects' and Builders' Service Committee of the American Gas Association was organized to assist local gas companies and architects to work together on a basis of mutual helpfulness. The foundations for the third step have been laid by this Committee through American Gas Association membership in the Producers' Council.

The Producers' Council is an organization of some forty nationally known manufacturers of building materials and appliances. This body is affiliated with the American Institute of Architects and works through that Association through the Technical Research Department of the American Institute of Architects. The Technical Research Department is a body which concentrates all technical and sales information from members of the Producers' Council in one place for the architect to tap easily and conveniently. The Producers' Council in turn tries to help the American Institute of Architects by aiding them in solving some of their problems.

The business of the gas companies and equipment manufacturers is spread over an enormous area. The advertising copy of the utility, and that of the gas appliance manufacturers conflict in many ways. It does not tell architect and engineer what they want to know in the way they want to learn. If a portion of what has been spent in telling the architect what he already knows were spent in telling the architect what he does *not*

know, more trade literature would be read, filed, and used, with the result that appliances and proper piping systems would be planned for more intelligently.

That there is a real and insistent demand among architects and engineers for accurate data and description of materials and appliances is clearly attested by the vast number of industrial associations and manufacturers whose efforts are directed toward intelligent market cooperation.

Primarily, the concept of the Producers' Council is based upon the broad economic principle of market cooperation as the means of fixing quality instead of price as the chief market consideration. In this council some of the following firms and trade associations may be found, whose work and findings are distributed through this media: American Institute of Steel Construction, Associated Tile Manufacturers, Copper and Brass Research Association, Portland Cement Association, National Terra Cotta Society, Otis Elevator Company, General Electric Company, Westinghouse Electric & Manufacturing Company.

The Producers' bulletins are edited by the Technical Research Department of the American Institute of Architects and are distributed by mail two or three times a year by the American Institute of Architects to its members throughout the United States, over 3,000 in number. Coming through such a source, the architect readily recognizes that the use of these standard size file bulletins will many times save him the cost of investigation, and will give him details, mechanical and technical, from which he may determine character and quality of materials and appliances and keep abreast of the market development and program.

The Technical Research Department will criticize and review all material submitted them from the American Gas Association, providing this material is the Association's own. This material may include the whole scope of the American Gas Association's Committees' findings.

The Architects' and Builders' Service Committee have assembled the following text data for the Technical Research Department: "Data for Estimating Hot Water Requirements and Size of Gas Equipment for Storage Systems," "Data on Flue Connections," "Data on Gas-Fired Steam Radiators," "Data on Gas Ranges," "Data on Domestic Incineration," "Data on Cabinet Clothes Dryers," "Data on Radiant Heaters for Fireplaces."

If all the scattered data could be collected and correlated, there would be in hand at once a fund of information covering a majority of the subjects upon which the architect, engineer, and, through them, the building owner, should be informed.

One of the foremost engineers in New York recently said that he knew something about the general work of the American Gas Association, of its well-defined program and of the general development work of the Gas Industry at large, and had a pretty fair idea of the wonderful strides the Association has made in the past decade in helping to develop gas utilization. Then he went on to say that the Testing Laboratory of the American Gas Association is a mighty and splendid project, but, why not make available to all architects and engineers throughout the country data sheets and printed information the industry gets out and make it a regular service to these people, possibly through local architects' and builders' service divisions?

He said: "Certainly, we read trade and technical journal advertising about new appliances and installation methods. We read and reread them. We are interested. Somehow or other we seldom like to plunge right in with something new, and that is where personal contact and confidence in the men which your utilities put out among the building fraternity will count."

That interview sums up the three steps outlined, that architects' and builders' service sections should be established in

every gas utility; that the Architects' and Builders' Service Committee of the American Gas Association will assist local gas companies in their work, and that, by initiating the cooperation of the American Institute of Architects through the Producers' Council, developments and progress of the gas industry will be broadcast to our largest buyer, the building industry.

Prices Set for Chapters on Scientific Progress

THE following comprehensive reviews of scientific progress affecting the gas industry, prepared by the Chemical Committee of the Technical Section, are now available at the prices quoted:

- Constitution of Coal, J. J. Morgan—\$0.25.
 - Physical and Chemical Properties of Coke in Relation to Its Manufacture and Use, A. R. Powell—\$0.30.
 - Carbonization of Coal, H. J. Rose—\$0.30.
 - Water Gas Manufacture, W. H. Fulweiler—\$0.30.
 - Complete Gasification of Coal—Use of Oxygen for Gas Making, R. S. McBride—\$0.25.
 - New Processes of Interest, R. T. Haslam—\$0.25.
 - Cleaning of Combustible Gases with Cottrell Electrical Precipitation Processes, N. W. Sultz—\$0.25.
 - Tar Refining and Tar Products, J. M. Weiss—\$0.35.
 - Light Oil Recovery and Refining, E. F. Pohlmann—\$0.30.
 - Recovery of By-Products Other Than Tar, Ammonia and Light Oil, H. A. Curtis—\$0.25.
 - Gas Purification, F. W. Sperr, Jr.—\$0.30.
 - Corrosion, W. J. Huff—\$0.30.
 - Materials of Construction, J. F. Anthes—\$0.25.
 - Blending Natural and Manufactured Gas, C. J. Wright—\$0.25.
 - Recovery of Waste Heat in Gas Manufacture, E. L. Hall—\$0.25.
 - Analytical Methods and Tests, A. F. Kunberger—\$0.35.
 - Application of Physical and Physico-chemical Research to Control Measurements in Gas Manufacture, S. P. Burke—\$0.30.
- Each of the chapters has been printed in separate pamphlet form, although a limited number of bound volumes containing the 17 chapters complete, are available at the price of \$1.50.

Does Home Service Affect Sales?

(Continued from page 338)

for the twelve months of 1925 and 1926, since these periods closely approximated the twelve months periods used in the case of home service customers. Sheets were made up similar to the following:

Mrs. John H. Witts, Jr.,
559 Osborn Street,
Fall River, Mass.

Month	1925	1926
January	\$ 5.13	\$ 4.25
February	4.00	3.63
March	3.88	3.75
April	3.75	3.88
May	3.88	4.13
June	3.50	3.38
July	3.25	3.63
August	3.50	3.50
September	2.63	2.38
October	3.25	3.63
November	4.13	3.38
December	3.63	3.63
	\$44.53	\$43.17

Net Dec. \$1.36

Comparisons were then made with the following results:

Comparison of accounts of 85 customers who attended one of the so-called "first course" series of lecture demonstrations given by the Fall River Gas Works Company with accounts of 85 other customers who did not attend classes so far as we know.

SUMMARY

Customers who attended Home Service Classes

33 customers' accounts revealed	
a net decrease	\$152.00
52 customers' accounts revealed	
a net increase	297.35
Net result (A)—Increase	\$145.35

Customers Who Did Not Attend Home Service Classes

46 customers' accounts revealed	
a net decrease	\$157.19
30 customers' accounts revealed	
a net increase	153.93
Net result (B)—Decrease	\$3.26
(A) + (B) =	\$148.61

This apparently insignificant amount in favor of home service may not be very impressive, but the fact remains that it does seem to support what we all want to believe. If all our domestic customers were to be influenced to use more gas

in the same ratio, gross earnings for us would be increased about like this:

$$\frac{28,000}{85} \times \$148.61 = \$48,954.$$

Remember this, an increase of five cents per month in the gross amount of each of our 31,000 (more or less) customers' bills would enable us to increase our dividend to stockholders in the amount of over one-half of one per cent.

If gas company executives who read this will be willing to prepare similar data covering one hundred customers who have taken home service courses and one hundred other customers who have not attended home service classes and submit the results, whether favorable or otherwise to the Home Service Committee of the American Gas Association, some little progress may be made toward partially answering the question "What Effect Does Home Service Have On Gas Sales?"

8000 Architect's File Folders Have Been Distributed

MORE than 8000 copies of the Architect's File Folder of prize house plans have been distributed by the Association. This folder was prepared from the results of the small house competition held last year, together with interesting and authoritative information about gas service in the modern home.

More than 200 companies have distributed the folder to architects.

Appliance Inspection

(Continued from page 347)

As stated, the second survey shows a decrease in calls upon the repair men from the gas shops and the electric appliance repair men. The inspection of appliances on the district, while a comparatively new venture, has already become an integral part of the every-day work of Westchester Lighting Company and its success has insured it a permanent place in the "sun" of service.

TECHNICAL SECTION

WALTER C. BECKJORD, Chairman

HARRY E. BATES, Vice-Chairman

H. W. HARTMAN, Secretary

Distant Block Control for Mercury Seal District Regulator

By CHARLES S. SNYDER

Superintendent, West Philadelphia District, Philadelphia Gas Works

SOME time ago we had a rather unique condition arise involving a mercury seal district regulator, the performance of which was influenced by gas escaping from a broken 6" main, the pressure in this 6" main controlling the outlet pressure of the regulator.

Close to the intersections of streets "A" and "B" (Fig. 1) there is a 20" mercury seal district regulator and the pressure under the drum is maintained by a 2" steel pipe connection from the 6" main on street "D," approximately 125 feet long. This 6" main supplies

gas to 54 two-story dwellings and a few street lights, and the gas supply to the 6" main is throttled by a partially closed valve at intersection of streets "C" and "D." As consumers in street "D" start to use gas the pressure in the 6" main tends to drop and this has the effect of increasing the regulator outlet pressure. It is thus readily seen that the regulator will maintain a constant pressure in street "D" and at the same time produce the desired high outlet regulator pressures during times of increasing and maximum demand. There is quite a large

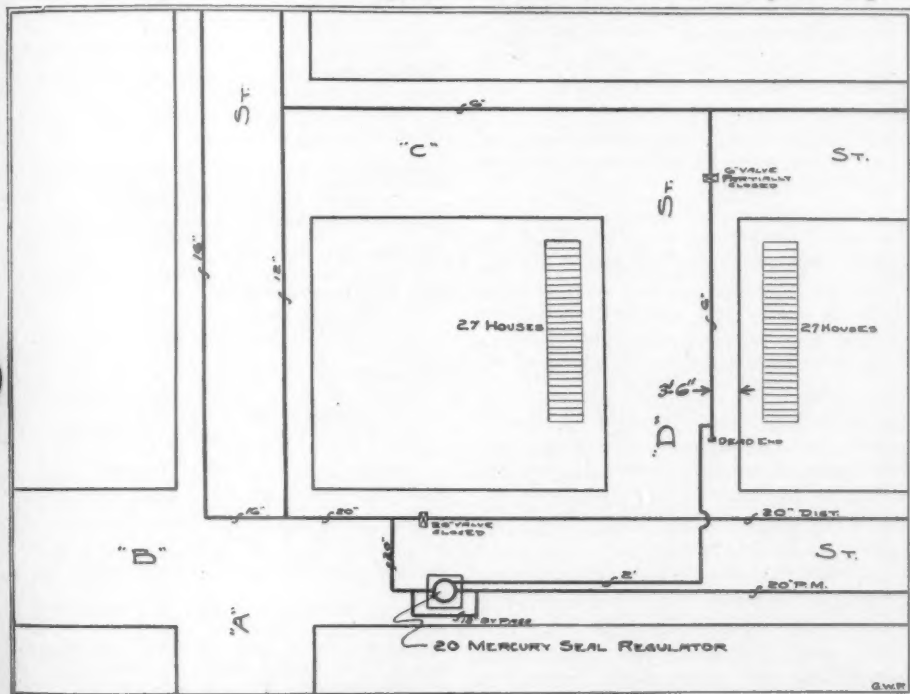


Fig. 1

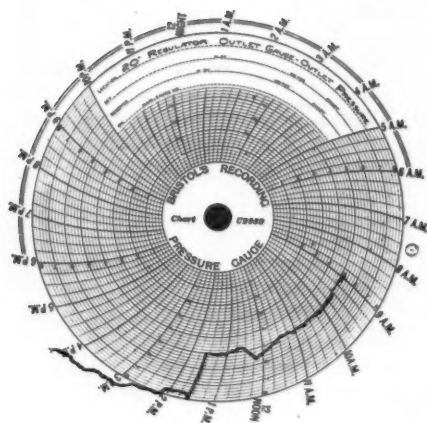


Fig. 2

difference in the pressures on each side of the 6" valve at street "C."

It requires $19\frac{1}{2}$ turns completely to close the 6" valve, and we are operating the regulator with this valve closed 6 turns. With the valve in this condition a constant pressure of 46-10 is maintained in the 6" main and during the hours of low consumption the regulator outlet pressure varies from 46-10 to 48-10. During the periods of maximum demand the regulator outlet pressure increases to as much as 10 $\frac{1}{2}$ ".

No services are connected to the 16" main on street "A" for a distance of 3600 feet from the regulator, and the first main connection is 1200 feet from the regulator. The first and second 6" main connections to the 12" main on street "A" are located 600 feet and 1200 feet respectively from the regulator. To prevent consumers connected to the 12" main or to small mains connected to the 12" main from having a too large variation in pressures or too high pressures, approximately 75 individual service regulators have been installed.

Street "D" is 20 feet wide between curbs and is paved with asphalt on a concrete base. The distance between curb and porch line is 10 feet, half cement walk and half grass plot. There is a cellar under the porch. The 6" main

was laid and the services installed during 1910. The street is a fill of reasonably good soil which was placed there probably five years before main was laid. The distance between the main and cellar foundation wall on right hand of street is 13' 6".

One afternoon at 3.35 p.m. we received a report of gas leak in cellar, and at 5.30 p.m. we found and repaired a bad break in the 6" main. The regulator outlet pressure chart (Fig. 2) shows that at 1.35 p.m. the pressure suddenly increased about 3 inches and no doubt this is the exact time the 6" main broke. In two hours gas from the broken main penetrated the 13' 6" of soil, and was noticeable in the cellars.

This indicates that in the case of loosely filled soil or a fill that consists mostly of ashes or rubbish, a very short interval must elapse between the breaking of a main and the presence of gas in cellars.

"Fouerfest Ofenbau" is the title of a new magazine, published at Leipzig by I. L. Litinsky. The magazine will cover all types of fire brick and ceramic materials used in oven construction.

OUR NEW MEMBERS

GAS COMPANY MEMBER

Washington Gas & Electric Co., 606-7 Lowman Bldg., Seattle, Wash.
City Gas Co., Antigo, Wis.
Havana Electric Railway Light & Power Co., Havana, Cuba.

HOLDING COMPANY MEMBER

Utilities Power & Light Corp., 327 S. LaSalle St., Chicago, Ill.
Mohawk Hudson Power Corp., Albany, N. Y.

Central Public Service Co., Chicago, Ill.

MANUFACTURER COMPANY MEMBERS

Abram Cox Co., Philadelphia, Pa.
Wrought Iron Range Co., St. Louis, Mo.
Gaffers & Sattler, Los Angeles, Calif.
Hoffman Specialty Co., Inc., Waterbury, Conn.
Snow Manufacturing Co., 2437 East 24th St., Los Angeles, Calif.

Hudson Gas Appliance Co. Inc., 920 Hackensack Plank Rd., North Bergen, N. J.

ASSOCIATE COMPANY MEMBERS

C. B. Babcock Co., San Francisco, Calif.

ACTIVE MEMBERS

Evans, Argees M., Federal Electric Co., Chicago, Ill.
 Olson, Barney, Lovekin Water Heater Co., Philadelphia, Pa.
 Gilpin, William V., Albuquerque Gas & Electric Co., Albuquerque, N. Mex.
 Watson, Harry E., Westchester Lighting Co., Yonkers, N. Y.
 Loughry, Theodore F., Surface Combustion Co., New York, N. Y.
 Hudson, William A., Birmingham Electric Co., Birmingham, Ala.
 Mandy, Norman Wilfred, Birmingham Electric Co., Birmingham, Ala.
 Hancock, Harry D., Cities Service Co., Kansas City, Mo.
 Mann, Harry L., Electro-Lux Servel Corp., New York, N. Y.
 Drake, John H., Jersey Central Power & Light Co., Morristown, N. J.
 McKay, Joseph T., New Orleans Public Service Inc., New Orleans, La.
 Wagner, Charles S., General Ceramics Co., New York, N. Y.
 Willsley, J. H., Lake Shore Gas Co., Ashtabula, O.
 Rumbold, A. H., Southeastern Heating Supply Co., Jacksonville, Fla.
 O'Connell, J. W., Western United Gas & Electric Co., Aurora, Ill.
 Carroll, H. P., Southwestern Gas & Electric Co., Beaumont, Tex.
 Malcor, Arthur C., Public Service Co. of Northern Illinois, Evanston, Ill.
 Swartwout, Everett W., The Connersville Blower Co., New York, N. Y.
 Wahl, Harold William, Westcott & Greis Inc., Tulsa, Okla.
 Brumbaugh, I. Vernon, American Stove Co., St. Louis, Mo.
 Hill, Samuel A., The Peoples Gas Light & Coke Co., Chicago, Ill.
 Hoy, Robert W., Pennsylvania Power & Light Co., Allentown, Pa.
 Wortendyke, I. F., Wisconsin Power & Light Co., Fond du Lac, Wis.
 Billings, D. W., Wisconsin Power & Light Co., Portage, Wis.
 Smith, H. R., Wisconsin Power & Light Co., Berlin, Wis.
 Thurston, A. L., Wisconsin Power & Light Co., Beloit, Wis.
 Walker, Hartley G., Pittsburg Water Heater Co., Pittsburg, Pa.
 Pritchard, Harry C., Utilities Power & Light Corp., New York, N. Y.
 Dodge, Benton G. L., The Richardson-Briggs Co., Cleveland, O.
 Saxton, Randall P., Public Service Electric & Gas Co., Jersey City, N. J.
 Givan, Jr., Henry C., Equitable Gas Co., Pittsburg, Pa.
 Wakeman, E. A., Pennsylvania Power & Light Co., Wilkes-Barre, Pa.
 Byrne, Thomas B., Board of Public Utility Commissioners, Newark, N. J.
 Crimmins, Maurice T., Consolidated Gas Co., of N. Y., New York, N. Y.

Maguire, Edward T., Bronx Gas & Electric Co., Bronx, N. Y.

Julian, J. Henry, Carbondale Gas Co., Carbondale, Pa.

Whitely, Fred., Wisconsin Power & Light Co., Fond du Lac, Wis.

Downs, Charles R., Weiss & Downs, New York, N. Y.

Hamilton, Archer B., Hartford City Gas Light Co., Hartford, Conn.

Problems of Public Utility Education in the Social Sciences

(Continued from page 342)

acquaint more or less immature students with the fundamental features of the utility industries.

The subject matter is divided into the following courses, each course extending for the durations of one half the school year:

The Principles of Public Utilities: A presentation and study of the economic principles governing the production, sale, pricing, and distribution of utility services.

The Theory and Practice of Public Utility Rate Making: An analysis of the price problem in public utilities, the theory on which rates are developed, the evolution of rate theory and practice, critical analysis of existing rate structures, and practical problems in rate building.

Public Utility Regulation: A study of the history and theory of regulation, methods and procedure, comparative analysis of the different regulatory bodies, commission rulings on all important points, and court interpretation of commission findings.

Public Utility Management: The problems of utility management, the relationships between management and the public, rewards of management, and practical problems in management selected from actual practice.

Public Utility Operation: Designed to acquaint the non-technical student with the general features of utility operation, the problems of the operator, technical improvements in the arts of service production, the limits and possibilities of production.

The second division, graduate work, is confined exclusively to selected students of proven merit who have already a college degree. The work is designed to lead to a Master's degree at the end of the first year, and a Doctor's degree at the end of the third year. Moreover, the work is open to graduate students other than those majoring in public utilities, who desire to make a study of public utilities a part of their general work in economics. It is gratifying to note that there is an increasing interest in public utilities among graduate students doing major work in banking, corporation finance, accounting, and business administration.

The graduate work is divided into two parts: First, a reading and discussion course in which the students are expected to familiarize themselves with the whole literature of the subject

and to read extensively on all the major divisions of public utility economics; second, a research or thesis course in which each student is expected to select some vital problem and investigate it thoroughly. The results of his investigation will be written up in the form of a thesis to be presented for examination to the faculty of the graduate school. Whether or not the student will be granted the degree to which he aspires will be determined by the character of his research, by the extent to which he has contributed to an analysis and solution of the problem, and by the general ability, initiative, and intelligence displayed in the course of the work.

The type of work done by the graduate students is probably the most important done by the university, if a judgment be based upon the probable results. It is from this group of students that the analysts, teachers, investigators, and writers of the future will be drawn. For this reason the promotion of graduate study in the economics of public utilities should be the subject of the most solicitous attention on the part of utility executives and educators who are interested in the advancement of knowledge regarding the service industries.

RESULTS TO BE EXPECTED

Utility executives who have given time and thought to the promotion of public utility education in the social sciences are naturally interested in the results that may be reasonably expected to flow from such work. Without attempting to elaborate upon the possibilities of the program, I shall set down what I consider to be some of the most important things which the utility man may expect, and likewise some of the things he should not expect.

1. It is reasonable to expect that young men, being familiar with the fundamental facts of the service industries as a result of their college training, will display a sympathetic and understanding attitude toward utilities. They will, in their capacity as citizens, approach utility problems in a reasonable frame of mind and will not be miscarried by every temporary gust of agitation and mob psychology. It should not be expected that they will agree in all particulars with all acts of all utility corporations. Furthermore, it should not be expected that their training will transform them into ardent utility advocates. If, however, they are rendered more competent than would otherwise be the case to bestow praise where praise is due and censure where that is due, to examine current utility practice in a scientific way, then their training will have been well worth while. If by chance some should in after years take an attitude opposed to public utilities, such an event should not be invoked as a condemnation of the

instruction itself. No system of education can guarantee the quality of the product. The only way is to present the facts as they are and let the course of human events proceed as it may. More than this no educator can do and still qualify in that capacity.

2. Some people are inclined to put too much faith in education as a means of creating mental capacity and intelligence. Lest some utility executives adopt this view in regard to the present instruction in public utilities, a word of caution against such a spacious expectation is not amiss. Education cannot create ability; it can only enlarge, develop, and give direction to the ability already inherent in men. It cannot even do this much unless supplemented by practical experience. Howsoever complete our instruction may be, the utility industries must still be prepared to give young men this practical experience. Probably the best we can hope to do is to send to the utility industries young men equipped with a broad knowledge of the fundamentals of the business and possessed of a solid foundation on which to build their future success.

3. It is to be expected that the present body of students engaged in the study of public utilities will in time augment the teaching ranks of the country. It is almost traditional that the teaching profession has in the past been lacking in that knowledge of business affairs which comes from intimate contact with the business world. The attitude of the teaching profession toward public utilities has in many cases been characterized by a lack of knowledge of the nature, functions, and operation of utilities. It is to be expected that the advent into the teaching profession of men familiar with utility affairs cannot help but make for a clearer and more rational presentation of utility questions.

4. In the last instance it is evident that the modern system of graduate study in the economics of public utilities will produce a number of qualified research men who will be available to help solve the problems of the service industries. Whether they drift into the employ of the utilities, the state commissions, city Boards of Control, Federal commissions, university faculties, private consultation, or private writing, they are destined to have a part in the moulding of public opinion and in establishing proper relations between the utilities and the public. In the last analysis it is not exceeding the bounds of reason to say that our whole experiment in public utility education in the social sciences will be judged eventually by the labors of these graduate students. On their failure or success rests the judgment of the future as to the wisdom of our present educational program.

Associations Affiliated with A. G. A.

K. R. Boyes, Secretary

Canadian Gas Association

Pres.—J. J. Armstrong, Consumers Gas Co., Toronto, Ont.
Sec.-Tr.—G. W. Allen, 7 Astley Avenue, Toronto.
Conv., Toronto, Ont., June 16 & 17, 1927.

Empire State Gas and Electric Association

Pres.—H. M. Brundage, Consolidated Gas Co. of New York, New York, N. Y.
Chairman Gas Section—J. E. Cooper, Utica Gas & Electric Co., Utica, N. Y.
Sec.—C. H. B. Chapin, Grand Central Terminal, New York, N. Y.
Conv., Lake Placid Club, Lake Placid, N. Y., Oct. 6 & 7, 1927.

Illinois Gas Association

Pres.—P. D. Warren, The Peoples Gas Light & Coke Co., Chicago, Ill.
Sec.-Tr.—R. V. Prather, 305 Illinois Mine Workers Bldg., Springfield, Ill.
Conv., 1928.

Indiana Public Utility Association—Gas Section

Pres.—E. Van Arsdale, 1100 J. F. Wild Bldg., Indianapolis, Ind.
Sec.-Tr.—E. J. Burke, Room 1270, Peoples Gas Bldg., Chicago, Ill.
Conv., 1928.

Michigan Gas Association

Pres.—C. R. Henderson, Washtenaw Gas Co., Ann Arbor, Mich.
Sec.-Tr.—A. G. Schroeder, Grand Rapids Gas Light Co., Grand Rapids, Mich.
Conv., Grand Hotel, Mackinac Island, Mich., July 5, 6, 7, 1927.

Mid West Gas Association

Pres.—C. A. Nash, United Light & Railway Co., Davenport, Iowa.
Sec.-Tr.—A. W. Schmidt, Des Moines Gas Co., Des Moines, Iowa.
Conv., 1928.

Missouri Association of Public Utilities

Pres.—W. H. Henby, St. Louis County Water Co., St. Louis, Mo.
Sec.-Tr.—F. D. Beardalee, 315 N. 12th St., St. Louis, Mo.
Conv., 1928.

New England Gas Association

Pres.—William Gould, Gas and Electric Improvement Co., Boston, Mass.
Secretary—E. A. Taylor, 100 Weybosset St., Providence, R. I.
Chairman Operating Div.—A. H. Scott, New Britain Gas Light Co., New Britain, Conn.
Secretary Operating Div.—F. E. Drake, Lynn Gas & Electric Co., Lynn, Mass.

Pres. Sales Div.—M. B. Webber, Marlboro-Hudson Gas Co., Boston, Mass.
Sec.-Tr.—Sales Div.—J. H. Sumner, 719 Massachusetts Ave., Cambridge, Mass.
Pres. Industrial Div.—R. J. Phelon, Worcester Gas Light Co., Worcester, Mass.
Sec.-Tr. Industrial Div.—J. J. Winn, Jr., Fall River Gas Works Co., Fall River, Mass.
Conv., 1928.

New Jersey Gas Association

Pres.—J. L. Conover, Public Service Electric & Gas Co., Newark, N. J.
Sec.-Tr.—Louis Stoecker, Public Service Electric & Gas Co., Newark, N. J.
Conv., 1928.

Oklahoma Utilities Association

Pres.—E. R. Ernsberger, Southwestern Light & Power Co., Oklahoma City, Okla.
Mgr.—E. F. McKay, Oklahoma City, Okla.
Conv., second week March, 1928.

Pacific Coast Gas Association

Pres.—W. S. Yard, Pacific Gas & Electric Co., San Francisco, Calif.
Exec. Sec.—Clifford Johnstone, 447 Sutter St., San Francisco, Calif.
Conv., Santa Cruz, Calif., Sept., 1927.

Pennsylvania Gas Association

Pres.—J. A. Weiser, Peoples Light Co., Pittston, Pa.
Sec.-Tr.—Geo. L. Cullen, Harrisburg Gas Co., Harrisburg, Pa.
Conv., 1928.

Southern Gas Association

Pres.—P. S. Arkwright, Georgia Railway & Power Co., Atlanta, Ga.
Sec.-Tr.—J. P. Connolly, 141 Meeting St., Charleston, S. C.
Conv., 1928.

Southwestern Public Service Association

Pres.—M. T. Walker, Southwestern G & E Co., Shreveport, La.
Chairman Gas Section—C. M. Thompson, Texas Power & Light Co., Waco, Texas.
Sec.—E. N. Willis, 403 Slaughter Bldg., Dallas, Texas.
Conv., 1928.

Wisconsin Utilities Association

Pres.—John St. John, Madison Gas & Electric Co., Madison, Wisc.
Exec.-Sec.—J. N. Cadby, 445 Washington Bldg., Madison, Wisc.
Conv., 1928.

Geographic Divisions

Eastern States Gas Conference

Pres.—H. H. Newman, Public Service Electric & Gas Co., Trenton, N. J.

Sec.-Tr.—J. C. Smith, Consumers Gas Co., Reading, Pa.
Conv., 1928.

Ninth Annual Convention of the American Gas Association		
Chicago, Ill.	Stevens Hotel	Oct. 10-14, 1927

Employment Bureau

(Address All Communications to Key Number)

SERVICES REQUIRED

WANTED by large gas company in middle west, salesman for industrial gas appliances. Address A. G. A.
Key No. 073.

SALESMEN—Large Public Utility Company operating in Central New York and many other states desires to employ several securities salesmen to sell company securities. Excellent opportunity. State salary, age, experience, married or single. Address A. G. A.
Key No. 080.

INDUSTRIAL GAS SALES REPRESENTATIVE: Gas company in a Middle Atlantic State has an opening for a technical college graduate, with fundamental knowledge of application and combustion of various fuels, to sell gas for industrial uses. Must be capable of making plant surveys of heat applications. State age, education, experience and salary desired. Address A. G. A.
Key No. 085.

SALESMAN—Chiefly for gas-fired steam radiators, also other gas appliances to work in New York City. One acquainted with plumbing and heating trade preferred. Salary and commission basis. Address A. G. A.
Key No. 094.

A PROGRESSIVE Gas Company in Mass. has an opening in its Industrial Gas Engineering Department for a Technical College Graduate to sell gas for industrial uses. State age, education, experience, and salary desired. A fine opportunity for the right young man. Address A. G. A.
Key No. 095.

SHOP FOREMAN—Wanted by Company operating in the Metropolitan District of New York City, 25,000 Meters. Must be thoroughly familiar with all classes of work on consumers' premises, industrial appliances, routing and transportation. Give age, experience and compensation desired. References will be considered confidential if requested. Address A. G. A.
Key No. 097.

MANAGER—Holding company desires a manager for one of its southern gas companies in city of about 15,000 population. Applicants please specify experience, training, present location, salary desired, and other facts in first letter. Address A. G. A.
Key No. 0103.

COMMERCIAL DEPARTMENT or Sales Executive: 18 years' experience in new business department and appliance sales activities and Management, with gas and electric companies. Technical University graduate. Capable of managing or supervising commercial or merchandising department activities for a large property or group of properties. Services available on short notice. References include present employer. Address A. G. A.
Key No. 0104.

SERVICES OFFERED

AGGRESSIVE COMMERCIAL MANAGER—34 years of age, available October or November. Thoroughly familiar, Industrial, Commercial and Domestic Sales Promotion. Address A. G. A.
Key No. 220.

ACCOUNTANT and Office Manager with wide experience in management, purchasing and all office details. Address A. G. A.
Key No. 223.

POSITION wanted as Superintendent of small gas company or as General Foreman of large plant. Approximately seventeen years' experience in all branches of manufacture and distribution, high and low pressure systems. Address A. G. A.
Key No. 224.

POSITION as manager of small gas or combination gas and electric property or as commercial manager of a larger property by a man thoroughly reliable with wide experience and a record for producing results. Address A. G. A.
Key No. 226.

CHEMICAL ENGINEER—with 7 years' experience in the testing and developing of different classes of gas appliances also familiar with the testing and utilization of natural gas and manufactured gas—A-1 references. Address A. G. A.
Key No. 227.

YOUNG ENGINEER—22 years of age, unmarried, with no objection to any part of the country wishes a position as Industrial Engineer in the Gas Industry. Has a knowledge of applications of heat and how to compute requirements. Employed at present as Assistant Industrial Engineer. Address A. G. A.
Key No. 228.

A GRADUATE of California University desires a position as Private Secretary and Stenographer, has considerable experience in Utility work and can give satisfactory references. Address A. G. A.
Key No. 229.

Advisory Council

J. M. BENNETT	Philadelphia, Pa.
F. L. BLANCHARD	New York, N. Y.
H. M. BRUNDAGE	New York, N. Y.
R. J. CANNIFF	Chicago, Ill.
F. F. CAULEY	Chicago, Ill.
H. H. CLARK	Chicago, Ill.
DEWITT CLINTON	Worcester, Mass.
R. C. CORNISH	Philadelphia, Pa.
WM. M. CRANE	New York, N. Y.
J. E. DAVIES	Chicago, Ill.
H. C. DAVIDSON	New York, N. Y.
S. E. DEFREESE	Rome, Ga.
J. S. DEHART, JR.	Newark, N. J.
W. E. DERWENT	Rockford, Ill.
CHAR. H. DICKEY	New York, N. Y.
L. R. DUTTON	Jenkintown, Pa.
WM. GOULD	Boston, Mass.
J. P. HAVTENKAMP	Rochester, N. Y.
J. P. HANLAN	Newark, N. J.
R. J. HOLE	Greensboro, N. C.
J. W. HEINS	Philadelphia, Pa.
J. J. HUMPHREYS	Montreal, Can.
F. H. KNAFF	Aurora, Ill.
A. P. LATHROP	New York, N. Y.
T. N. MCCARTER	Newark, N. J.
DONALD McDONALD	New York, N. Y.
C. O. G. MILLER	San Francisco, Calif.
OSD. PRESTON	Washington, D. C.
C. J. RAMSBURG	Pittsburgh, Pa.
H. S. REESIDE	Washington, D. C.
W. A. SAUER	Chicago, Ill.
H. S. SCHUTT	Philadelphia, Pa.
W. L. SMITH	Battle Creek, Mich.
F. C. WEHR	New York, N. Y.
L. J. WILLIEN	Chicago, Ill.
D. J. YOUNG	Tacoma, Wash.

AMERICAN GAS ASSOCIATION, INC.

HEADQUARTERS: 430 LEXINGTON AVE., NEW YORK, N. Y.

Officers and Directors

PRESIDENTA. B. MACBETHLos Angeles, Cal.
VICE-PRESIDENTO. E. FOGGNew York, N. Y.
MANAGING DIRECTORALEXANDER FORWARDNew York, N. Y.
TREASURERC. E. PAIGEBrooklyn, N. Y.
ASSISTANT TREASURERA. C. RAYNew York, N. Y.
SECTIONAL VICE-PRES.W. C. BECKJORDNew York, N. Y.
SECTIONAL VICE-PRES.J. J. BURNSSt. Louis, Mo.
SECTIONAL VICE-PRES.H. C. CLARKNewark, N. J.
SECTIONAL VICE-PRES.H. O. LOEBELLNew York, N. Y.
SECTIONAL VICE-PRES.W. E. STEINWEDELLCleveland, O.
SECTIONAL VICE-PRES.A. L. TOSSELLChicago, Ill.

H. C. ABELLNew York, N. Y.
D. D. BARNUMBoston, Mass.
T. R. BEALPoughkeepsie, N. Y.
E. B. BROWNMilwaukee, Wis.
HOWARD BRUCEBaltimore, Md.
GEO. B. CORTELYOUNew York, N. Y.
H. L. DOHERTYNew York, N. Y.
P. H. GADSDENPhiladelphia, Pa.
ARTHUR HEWITTToronto, Can.
ALFRED HURLBURTPittsburgh, Pa.
J. B. KLUMPPPhiladelphia, Pa.
R. M. LEACHTaunton, Mass.
F. A. LEMKEKalamazoo, Mich.
CHARLES A. MUNROEChicago, Ill.
H. C. MORRISDallas, Texas
B. J. MULLANEYChicago, Ill.
G. W. PARKERSt. Louis, Mo.

Section Officers

ACCOUNTING—ChairmanA. L. TOSSELLChicago, Ill.
Vice-ChairmanEDWARD PORTERPhiladelphia, Pa.
SecretaryH. W. HARTMANAss'n Headqtrs.
PUBLICITY AND ADVERTISING
ChairmanHARLOW C. CLARKNewark, N. J.
Vice-ChairmanE. F. GARDINERChicago, Ill.
SecretaryC. W. PERSONAss'n Headqtrs.
COMMERCIAL—ChairmanJ. J. BURNSSt. Louis, Mo.
Vice-ChairmanG. M. KARSNERNew York, N. Y.
SecretaryJ. W. WEST, Jr.Ass'n Headqtrs.
INDUSTRIAL GAS—ChairmanH. O. LOEBELLNew York, N. Y.
Vice-ChairmanF. C. MACKEYChicago, Ill.
SecretaryC. W. BERGHORNAss'n Headqtrs.
MANUFACTURERS—ChairmanW. E. STEINWEDELLCleveland, O.
Vice-ChairmanH. L. WHITELAWNew York, N. Y.
SecretaryC. W. BERGHORNAss'n Headqtrs.
TECHNICAL—ChairmanW. C. BECKJORDNew York, N. Y.
Vice-ChairmanH. E. BATESChicago, Ill.
SecretaryH. W. HARTMANAss'n Headqtrs.

MANAGING DIRECTORALEXANDER FORWARDAss'n Headqtrs.
ASSISTANT MANAGERH. W. HARTMANAss'n Headqtrs.
SECRETARYK. R. NOYESAss'n Headqtrs.

